



Pishin

Integrated District Development Vision



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Acronyms

BEMIS	Balochistan Education Management Information System
BEPA	Balochistan Environment Protection Agency
BHMIS	Balochistan Health Management Information System
BISP	Benazir Income Support Programme
BLGO	Balochistan Local Government Ordinance
CCB	Citizen Community Board
CNG	Compressed Natural Gas
CNIC	Computerised National Identity Card
CSOs	Civil Society Organisations
DFPAP	District Forest and Protected Area Plans
EOBI	Employees Old-Age Benefits Institution
EPI	Expanded Programme on Immunization
FAO	Food and Agriculture Organisation
GIS	Geographic Information System
GoB	Government of Balochistan
GoP	Government of Pakistan
IDDV	Integrated District Development Vision
IUCN	International Union for the Conservation of Nature
LHW/V	Lady Health Workers/Visitors
LPG	Liquefied Petroleum Gas
M&E	Monitoring and Evaluation
MAP	Medicinal and Aromatic Plants
MICS	Multiple Indicators Cluster Survey
NGOs	Non Government Organisations
NIPS	National Institute of Population Studies
O&M	Operation and Maintenance
PHED	Public Health Engineering Department
PSDP	Public Sector Development Programme
SMEs	Small and Medium Enterprises
UNDP	United Nations Development Programme
UNICEF	United Nations Children Fund
WB	World Bank
WHO	World Health Organization
WLL	Wireless Local Loop
WWF	World Wildlife Fund

Executive Summary

Pishin district’s Integrated District Development Vision (IDDV) presents a statement of the district’s development vision and in the absence of other strategic plans it may be read as a policy statement on part of the district. A development vision expresses a desirable future condition envisaged by a nation, region or administrative unit, and charts a course of action for its attainment. It is a statement of commitment that expresses concerns and values of local communities regarding their priorities and resource allocation decisions.

Five principles have guided the IDDV's formulation process:

- Consultation with citizens and stakeholders;
- Consensus building;
- Long term sustainability;
- Integrated planning and management; and
- Equity (gender and income).

Pishin’s IDDV has gained legitimacy as consultations were the bedrock of its formulation process. These have provided a way to capture local and collective thinking, transform a spirit of collective responsibility into action, and ensure ownership of priorities and choices. A total of 241 people have participated in consultations in 28 meetings/workshops.

The IDDV formulation process was launched in October 2008 and completed in May 2011. It spanned two very different legal dispensations at the district level – in 2008 the Balochistan Local Government Ordinance 2001 was still effective and

Figure 1: Enrolment (primary, middle and high) by gender

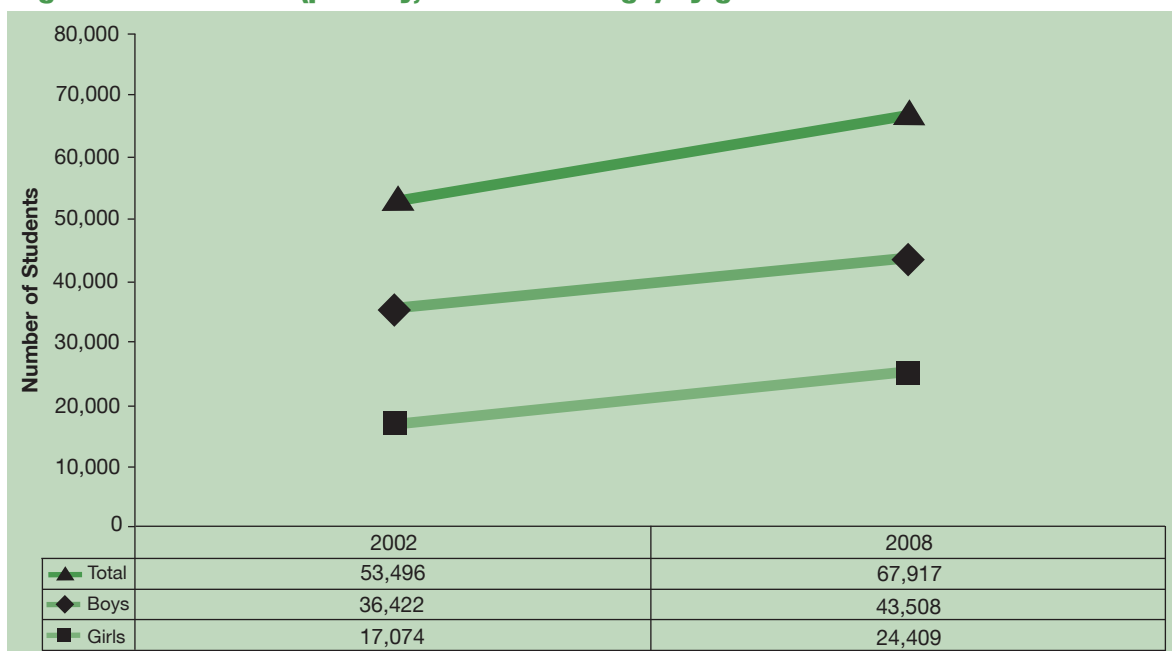
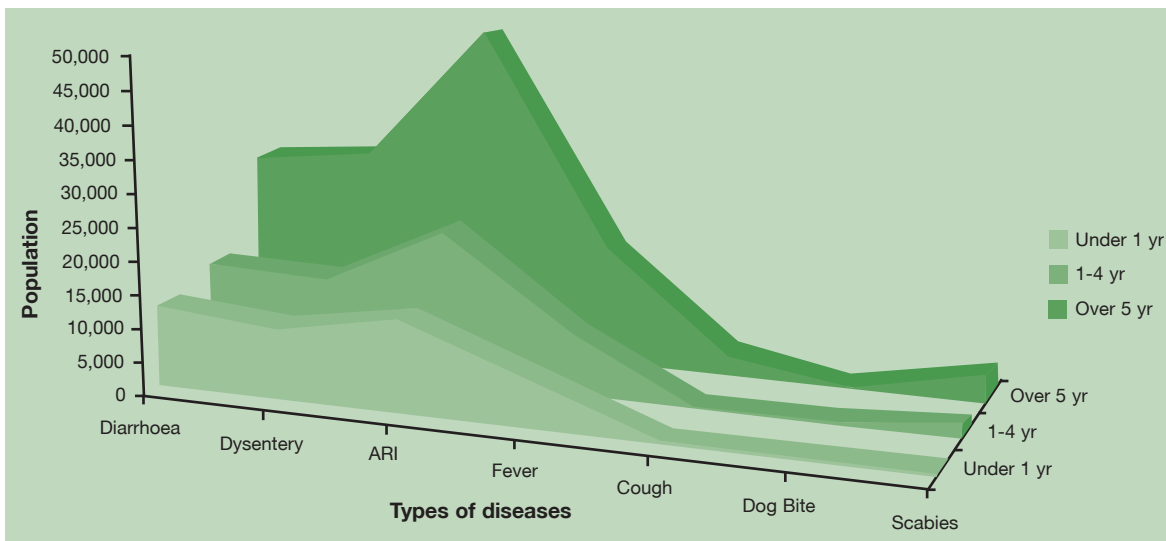


Figure 2: Priority diseases in Pishin district (2009)

Source: Balochistan Health Management Information System, 2009

currently a new local government ordinance is awaited. Regardless of the governance system, district level visions and plans provide focus and continuity to work at the district and provincial levels. They ensure the following good practices:

- Consensus in planning, target setting and fund allocation;
- Participation, particularly of women in decision making;
- Equity and where necessary positive discrimination for the poor and vulnerable;
- Responsiveness to citizens and clients/customers;
- Effectiveness and efficiency in service delivery;
- Social accountability and transparency of information; and
- Enforcement of laws.

In 1998, the total number of rural localities were 386 with a total rural population of 344,228 (93.7 per cent of the total population) in Pishin district. Pishin town was the only urban area in the district in 1998 with a population of 22,955 (6.3 per cent of the total population). The total population of the district in 1998 was 367,183. The sex ratio of males: per 100 females was 114.9 indicating the impoverishment of women. In addition there are close to 150, 000 Afghan refugees in the district. Additionally, nomads from Afghanistan, and their livestock, migrate into and through the Toba Kakari highlands to spend the winters in Balochistan. The major tribes in the district are Kakar, Tarin, Syed and Achakzai.

Landowners and traders are generally Tarins, Kakars and Syeds. Pashto is widely spoken while Urdu is also spoken in urban areas.

The average number of persons per household in 1981 was 8.6 (3.6 persons per room). The household size was 9.1 in 1998. The majority of the population (66.72 per cent) lived in 2-4 room houses. According to the Multiple Indicator Cluster Survey (2004), in Pishin district, there were 3.1 persons per room. The percentage of households with access to piped water was 47.9 per cent. 23 per cent of households had adequate sanitation facilities, 78.4 per cent of households had electricity, 45.4 households had exposure to radio. The population density of 37.5 persons per km² in 1981 increased to 46.96 persons per km² in 1998. Pishin Town and its surrounding areas are densely populated. The villages in the Pishin district range from 30 to 300 households.

In Pishin district, about 6.03 per cent of the housing units have the standard *pucca* walls made of baked bricks/blocks and stones with cement bonding compared with 4.77 per cent in rural areas. 85.19 per cent of the walls are made of un-backed bricks with mud bonding.

Pishin's risk status for natural disasters is:

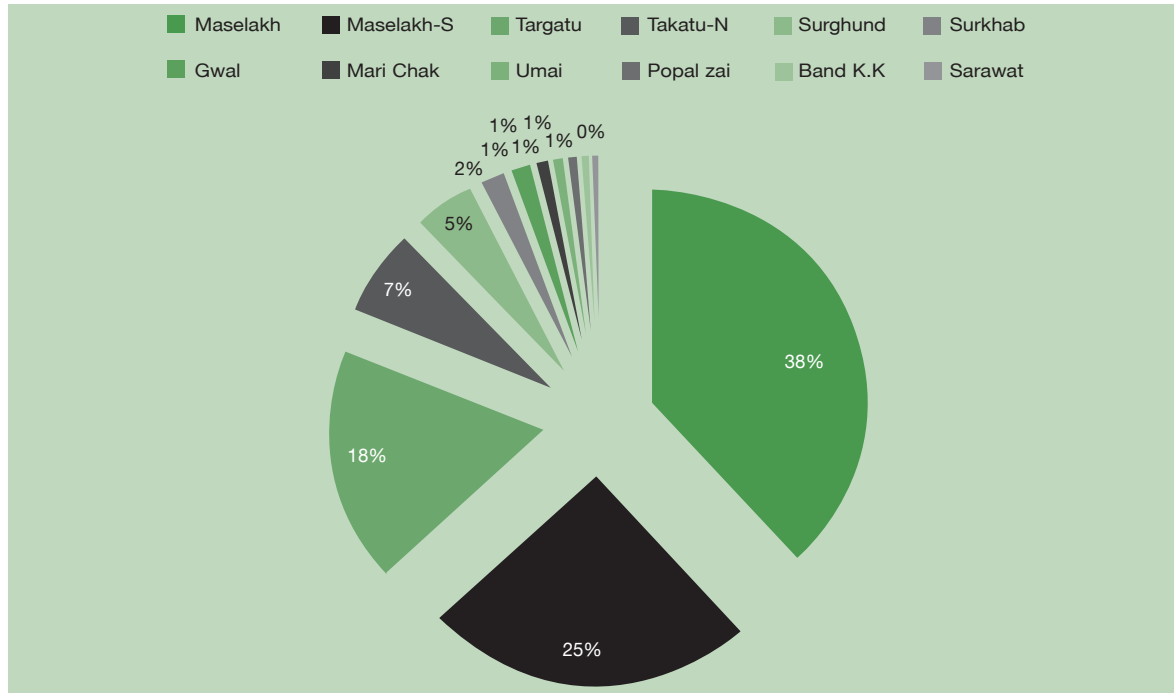
1. high for earthquakes;
2. high for droughts; and
3. low for floods, locusts/pests.

The literacy rate in the district is 31.4 per cent (male literacy rate 47.29 per cent and the female literacy rate 13.15 per cent). There are over 800

schools in the district (different sources quote different numbers). *Mohallah*/home schools, 37 mosque schools (primary level) and a small number of primary schools are managed by the private sector. Some of the government's primary schools are provided some assistance from international donors and NGOs. Vocational

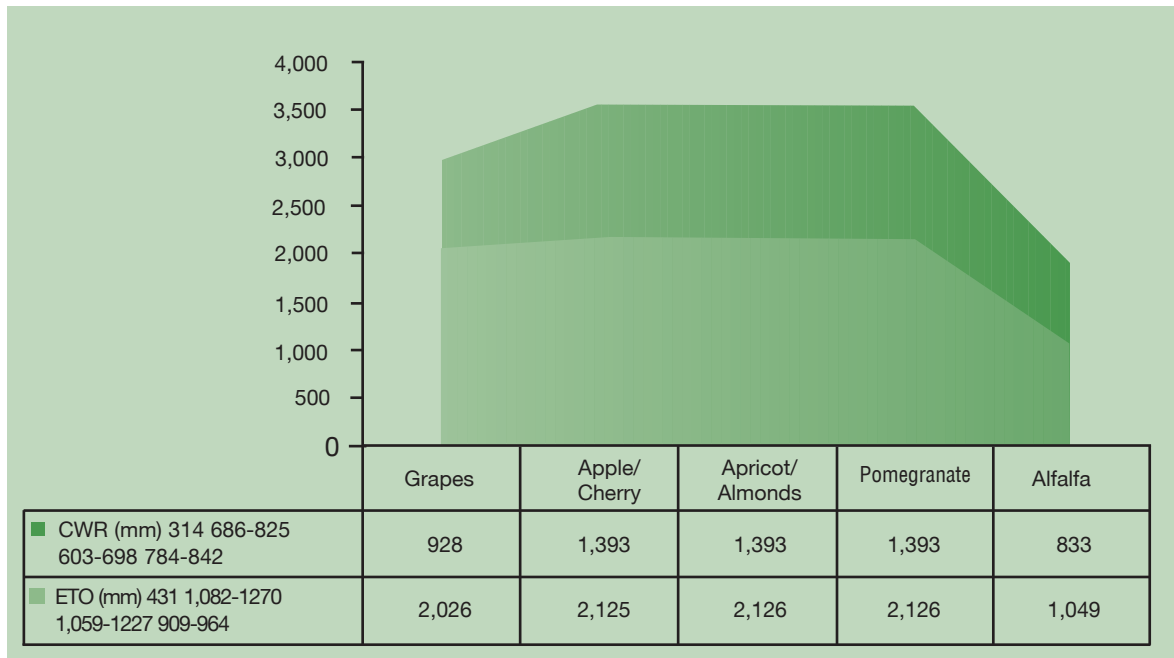
training, middle schools, high schools, colleges, teacher training institutes are mainly managed by GoB. In Pishin district all government primary, middle and high schools teach in Urdu. Only one private middle school teaches in English. There is no technical school, polytechnic institute or Cadet College in Pishin. No specialised courses for

Figure 3: Designated forests and area in Pishin district (2010)

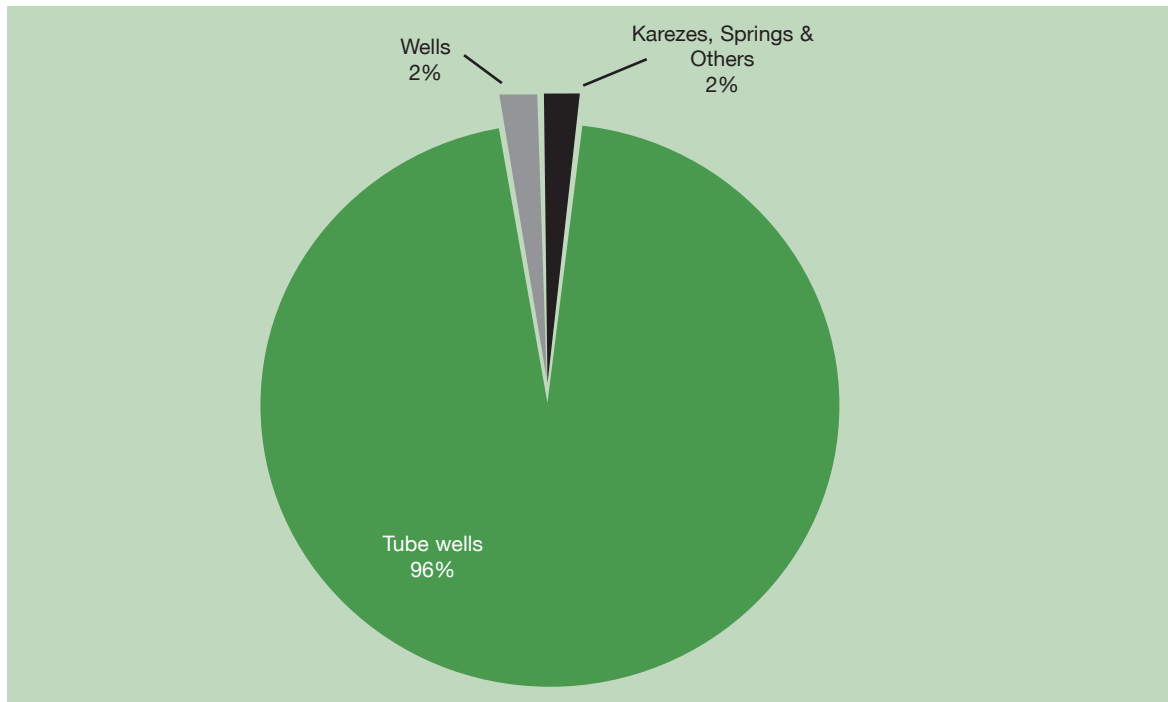


SOURCE: Balochistan Forest and Wildlife Department, 2010

Figure 4: Crop and water requirement in zone V (includes Pishin)



Source: Water Requirements of Major Crops for Different Agro-Climatic Zones of Balochistan, 2006

Figure 5: Sources of water for irrigation in Pishin district

Sources: Agricultural Statistics of Balochistan, 2008-09

learning English or computer science are offered in the district.

Out of 69 doctors in the district 55 were male and 14 female; of seven nurses two were male and five female; there was one pharmacist, 40 Lady Health Workers and 62 *daees*/midwives. In 2007, 220,410 outpatients were treated in hospitals and dispensaries including 103,828 males and 116,582 females. According to MICS 2004, 46 per cent mothers received antenatal care from a skilled health worker in Pishin district; skilled attendants provided 8 per cent mothers information on HIV/AIDS. Between 12-23 months of age 23 per cent children were fully immunised, 18 per cent partially immunised, and 59 per cent were not immunised at all.

In 2006-07 there were:

1. 45 bed District Head Quarter Hospital
2. 29 Basic Health Units
3. Six Rural Health Centres with 10 beds each
4. 19 Civil Dispensaries
5. Four Mother and Child Health Centres
6. 9 Health Auxiliaries
7. One TB clinic

8. 1 Mobile Health Unit
9. Three school health service units for vaccination and drug control.
10. In the private sector there were only two hospitals with 10 beds each.
11. EPI Centres, family welfare clinics, family planning clinics, and a nurse training school are also present in the district.

Sanitation and solid waste coverage is poor and public health risks are high. The main source of drinking water was groundwater, with the majority of households served by electric or diesel generated tube wells/piped schemes. The Public Health Engineering Department (PHED) and the municipal administration have been struggling to provide improved drinking water. PHED built 187 water supply and sanitation schemes of which 44 are managed by PHED and 137 have been transferred to communities. According to information provided by the local government, 57 per cent of the population in Pishin district had access to improved sources of drinking water, 49 per cent households had this access, and 52 per cent had access within one km distance or half-an-hour return travel time. Of the 57 per cent population that had an improved water source, only 2 per cent disposed wastewater safely. Adequate sanitation is provided to 23 per cent of the population. 91 per cent of the population wash

their hands before eating whereas 21 per cent wash their hands after returning from the toilet.

Improved natural resource management remains a challenge in the absence of baseline maps which would help reconcile basic data such as area of district, consolidated area, cultivated area, forests, rangelands, etc. From discussions and consultations it is clear that the reason for inertia amongst citizens, decision makers and stakeholders on the non sustainable over

exploitation of ground water resource is not only lack of awareness. The onus for action rests with the Pishin District Government to lobby for the removal of subsidy on electricity for agricultural purposes and the rehabilitation of *karezats*. The sustainability of livestock, agriculture, rangelands and forests rests on water availability as does that of human settlements.

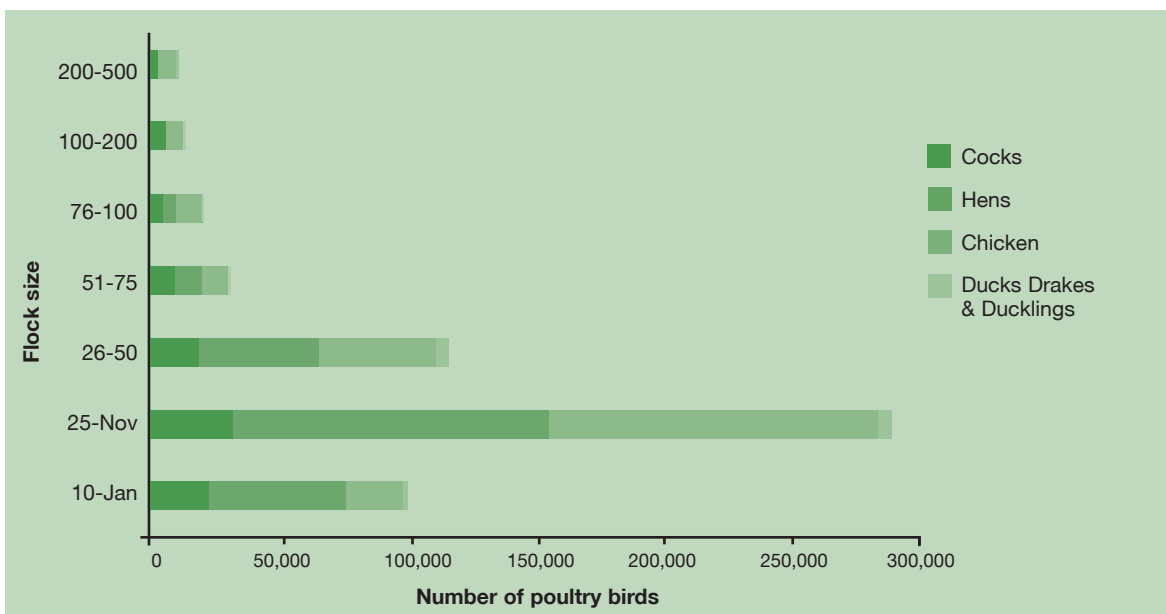
More than one third of the area i.e. 37.32 per cent is not even reported (non-surveyed).

Figure 6: Agricultural machinery in Pishin district (2008-09)

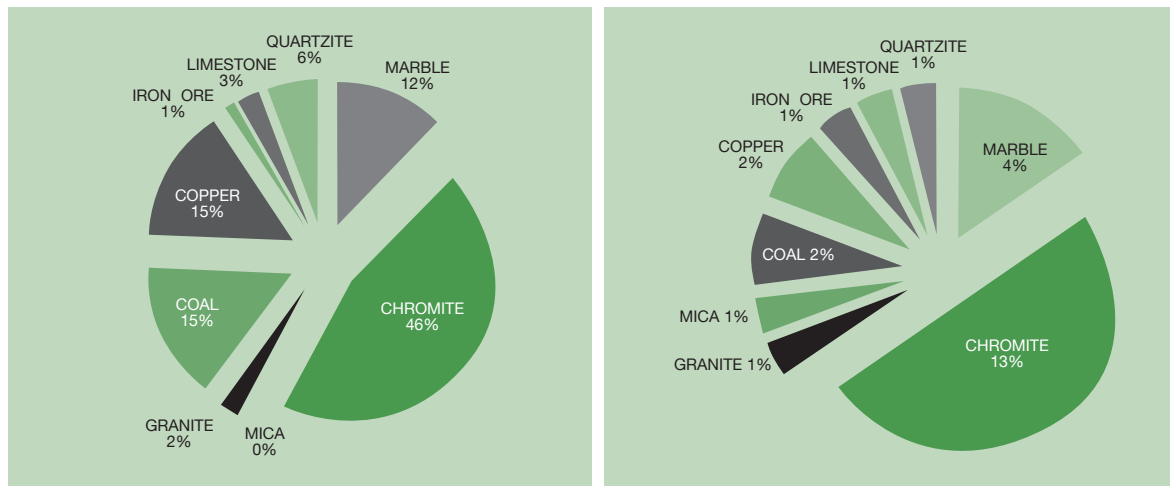


SOURCE: Agricultural Statistics of Balochistan, 2008-09

Figure 7: Number of domestic poultry birds by size of flock in Pishin district (2006)



SOURCE: Balochistan Livestock Census, 2006

Figure 8: Mineral wise number of concessions granted and area as of 30th June, 2006

SOURCE: Balochistan Directorate General of Minerals and Mining, 2010

The total geographical area of the district is 8,812 km². The reported area is 293,868 hectares (about 37.32 per cent) and 493,532 hectares is non-reported area is (about 62.68 per cent) of the total geographical area. In 2008-09, the area, which was not available for cultivation, was 82,150 hectares (27.95 per cent of reported area). Total uncultivated area is 141,434 hectares (48.12 per cent). Area under forests is 26,438 hectares (8.99 per cent). Total cultivated area in the year 2008-09 was 152,434 hectares (51.87 per cent) out of which 31,667 hectares (10.77 per cent) was the net sown area. Cultivable waste was 32,846 hectares (11.17 per cent).

Agriculture and livestock are the mainstay of the economy. Agriculture consumes 95 per cent of the groundwater and most of the surface water. As groundwater availability drops a shift away from agriculture (particularly orchards) to livestock is expected. Moreover, in order to ensure that livestock assets do not perish during any future droughts infrastructure for slaughtering, selling and storage needs to be built. Livestock and poultry common in the district are chickens, goats, cows, sheep, asses, camels, buffaloes, mules and horses. 22,865 households reported on the number of cattle; the number of animals reported was 91,433; number of male cattle three years and above was 7,018, of which 3,858 were used for breeding, number of male cattle below three years was 17,914; the number of female cattle was 53,654-47,427 were in milk, 3,577 were dry and 2,650 had not yet calved; and the number of female cattle below three years was 12,848. Out of 22,258 households 7,196 (32.33 per cent of the total) got their cows and buffaloes artificially inseminated; 3,228 (14.5 per cent) households did not like artificial insemination whereas 2,103 (9.45 per cent) households reported that the Artificial Insemination

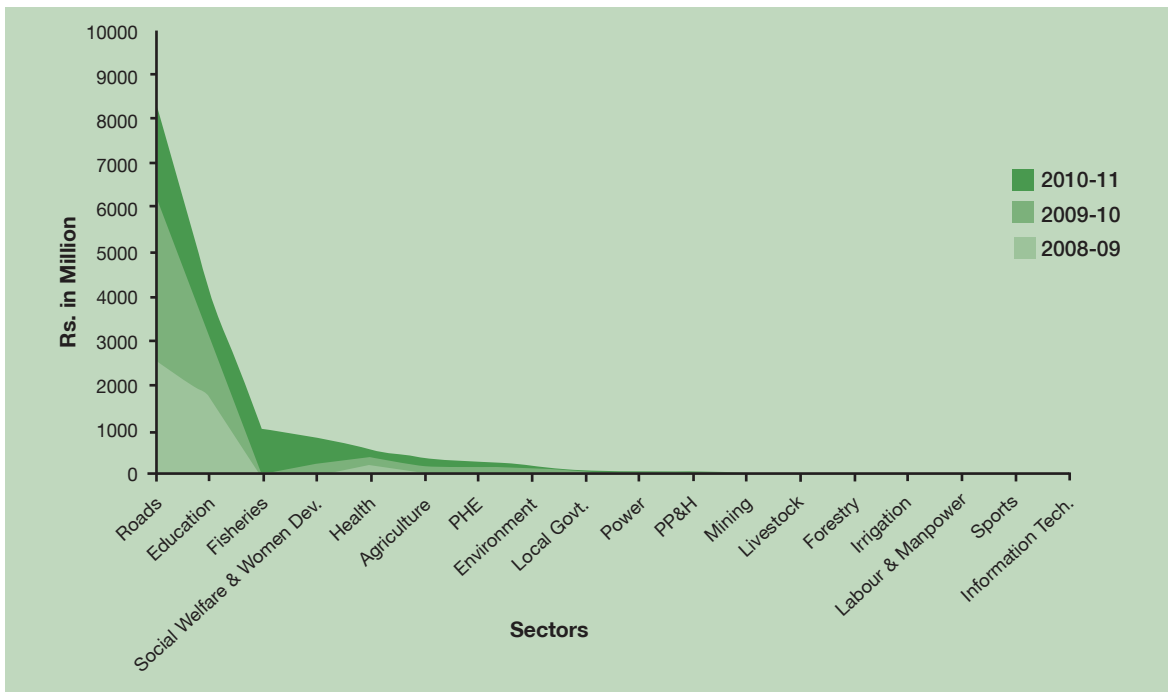
Centre was located at a distance that was beyond the reach of the households. There are seven veterinary hospitals and 27 veterinary dispensaries. During 2007, 194,457 animals were treated, 277,984 vaccinated and 790 castrated. The most prevalent diseases among livestock in the district are foot and mouth disease, round worms, ticks, and tetanus.

The district is home to a number of forests which are under threat, not only because of water shortage and overgrazing but also because of the high dependence on wood for heating. The total forest area of Pishin district, as per the Government of Balochistan's (GoB) notifications, is 73,775 hectares. This includes rangelands like Maslakh (28,243 hectares) as well as a part of Surghund Forest. There is an additional artificial forest reserve situated at Bund Khush Dil Khan of over 475 hectares. Forests not only play a vital role for microenvironments and biodiversity but have tremendous potential for ecotourism (catering both to people residing in the district, therefore expanding the number of cultural and recreational opportunities, and to tourists from outside the district).

Of the local workforce, 49.9 per cent of the employed labour force was in the agricultural sector, and an additional 15-20 per cent worked on lands irrigated by tube wells i.e. about 60,000 workers were engaged in the agricultural sector. Skilled agricultural workers were only 50.30 per cent of the total employed and active labour force.

Over the next few years Pishin District Government, in collaboration with GoB and other development partners, will prepare plans and strategies that will enable the implementation of the IDDV. Interventions addressing endemic inefficiencies such as inappropriate human

Figure 9: Sectoral PSDP Allocation (2008-09/2009-10/2010-11) for Pishin district



SOURCE: PSDP, 2008-09, 2009-10 and 2010-11

resource systems, lack of transparency of information, and poor capacity will be integral to these plans as will gender mainstreaming. Furthermore the need for incentives for working in remote areas and improvements in the law and order situation will be addressed through these plans and strategies:

1. Population settlement strategy: zoning, land use, settlement hierarchies etc.
2. Disaster mitigation and preparedness strategy
3. Social sector plans: education, health, and water and sanitation
4. Culture and recreation strategy: ecotourism, handicrafts etc.
5. Livelihood diversification plan including strategies for mines and minerals, energy and private sector participation
6. Natural resource management: integrated water, forests and protected areas, rangelands, and wildlife
7. Agriculture plan including floriculture

8. Livestock and poultry plan
9. Monitoring and evaluation plan

One of the major challenges that lies ahead is the alignment of district priorities with provincial financial allocations. As the situation stands currently there is a mismatch between priorities identified during the IDDV formulation process and provincial government priorities as reflected in financial allocations. The IDDV identified the following priorities (in descending order): drinking water, health and education. The provincial government has allocated finances based on the following priorities (descending order): communication and roads, urban planning and development, health.

The test of Pishin's IDDV rests on its ability to mobilise resources - human, financial, political and environmental. This requires detailed sectoral plans and budgets, the merging of these sectoral plans into a detailed district strategic plan with a budget, and finally the alignment of financial allocations according to the district's strategy. Translation of the IDDV into action therefore requires proactive planning for efficient and effective achievement of district level goals.

1. Introduction

A 'development vision' expresses a desirable future condition envisaged by a nation, region or administrative unit, and charts a course of action for its attainment. It is a statement of commitment that expresses concerns and values of local communities on their priorities and resource allocation decisions.

Such a vision needs to be able to mobilise resources – human, financial, environmental and political – to achieve common development goals. A wide consultative process involving all stakeholders is a prerequisite for such a vision to evolve. This provides a way to capture local and collective thinking, transform a spirit of collective responsibility into action, and ensure ownership of choices made.

Translation of the vision into action requires proactive planning for efficient and effective achievement of goals. Planning involves: setting of short, medium and long term targets; integration and interaction across sectors, tiers and partners; definition of roles and responsibilities; and incorporating learnings highlighted by the monitoring and evaluation system.



In the absence of democratic representation at the district level, the Integrated District Development Vision (IDDV) can play a pivotal role in ensuring effective, efficient, equitable and sustainable services. It can facilitate in the:

1. Translation of provincial policies, strategies and priorities;
2. Identification of district development priorities;
3. Articulation of budgetary priorities;
4. Introduction of people-centred planning and coordination and participatory approaches to service delivery and monitoring;
5. Optimisation of systems and capacity (civil society, private sector etc.);
6. Inculcation of monitoring and evaluation services;
7. Collation of baseline information;
8. Preparation of district wise sector specific plans; and
9. Integration of inter-sectoral coordination.

The Pishin IDDV is robust, commands ownership from a range of stakeholders, and has maintained legitimacy under different legal and institutional dispensations.

The Pishin IDDV was started when the Balochistan Local Government Ordinance 2001 (BLGO 2001) was still in effect. Under this new local government system, elected representatives headed local governments and were supported at the provincial level by more transparent institutions such as the Provincial Financial Commission. The Balochistan Assembly repealed the BLGO 2001 in March 2010.

As the first comprehensive sustainable development strategy for the district, Pishin's IDDV represents a statement of district government policy. The Deputy Commissioner will implement the IDDV as they oversee and

coordinate provincial departments at the district level; the Vision will work towards reducing the deficit in trust and coordination that exists amongst stakeholders. A committee may be established (or the IDDV Committee may be continued) with representation from key stakeholders to oversee the implementation of the IDDV and to revise, update and improve on it.

1.1 Procedure and methodology

Pishin IDDV's legitimacy is anchored in a broad based consultative process. The IDDV was launched at a meeting presided by the District Coordination Officer¹ Pishin in July 2008. An IDDV Committee was established that oversaw the formulation process.

The following principles guided the formulation process of the Pishin IDDV:

1. Consultation with citizens, communities and key stakeholders;
2. Consensus building;
3. Long-term sustainability;
4. Integrated planning and management; and
5. Equity (gender, income etc.).

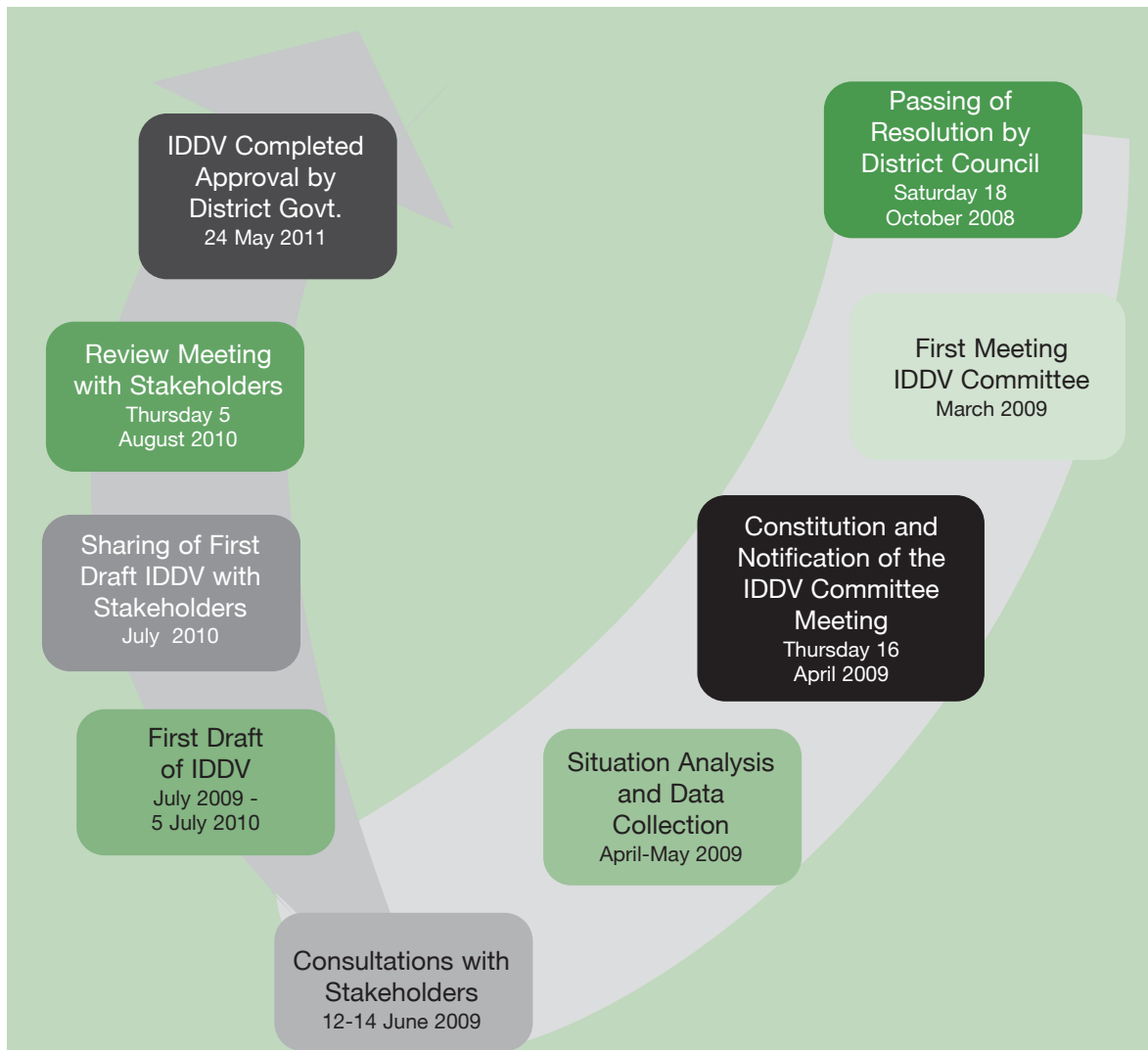
During the IDDV formulation process 28 meetings/workshops were held in which a total of 241 people participated.

A search for published and un-published data and analysis pertaining to the district was undertaken and collated.² The information gathering procedure included discussions with:

1. Citizens and community representatives;
2. Private sector representatives (mining, agriculture, livestock, poultry, water, transport, businesses, tourism, traders/transporters from outside the district);
3. Media (print and electronic);

¹ Provincial government nominee who worked under an elected District Nazim.

² All the data has not been included in this report. Interested readers may request Pishin District Government or IUCN for additional data.

Figure 1: IDDV formulation process

Source: Based on data sent by IUCN 'IDDVs Chronology'

4. Academia (education and research organisations in the country); and
5. Civil Society Organisations (CSOs) and Non-Governmental Organisations (NGOs) such as Balochistan Rural Support Programme (BRSP), Taraqee Foundation and Strengthening Participatory Organization (SPO); and
6. International organisations, e.g. International Union for the Conservation of Nature (IUCN) and the Food and Agricultural Organisation (FAO).
7. The district administration distributed a draft to stakeholders for views, feedback and comments. A consultative workshop

was held on the IDDV before its endorsement.

1.2 Governance

In 1839, the British occupied Pishin for the first time. They then re-occupied it in 1875. In April 1883 it was included in the administrative unit of Quetta, under a Political Agent/Deputy Commissioner. In 1975, Pishin was separated from Quetta and given the status of a district. In 1994, Pishin was bifurcated into two districts: Pishin and Qila Abdullah.

The elected representatives from the National Assembly constituency NA-261 Pishin-cum-Ziarat and three provincial assembly

constituencies (PB-8 Pishin-I, PB-9 Pishin-II, and PB-10 Pishin-III) represent the people of Pishin district in the National Assembly and Balochistan Assembly respectively. Tribal affiliations play a crucial role in electing public representatives.

Pishin is further divided into five tehsils: Pishin, Karezat, Barshore, Hurrainzai (partially functional) and Saranan (notified but not functional as a tehsil). Saranan tehsil consists of the southern part of the existing Pishin tehsil. Ajram and other southern areas may receive more attention from this arrangement. There are 17 Patwari Circles in these five tehsils.³

Generally, the security situation in Pishin district has been unaffected by militancy. Until recently, the responsibility for law and order in Pishin district was divided between the police department, which was responsible for urban areas and Levies which were responsible for rural areas (Levies work under the supervision of Tehsildars). In 2007, Pishin district had only eight police stations.

Under the 18th amendment to the Constitution of Pakistan, subjects on the concurrent list have been transferred to the province. Currently, it is unclear how many of

these functions will be transferred by the Government of Balochistan (GoB) to its departments' district administrations. In addition, the GoB is designing a new local government system. Therefore the structures, through which citizens engage with the state for areas related to everyday life, remain in flux.

The GoB has decided to continue with certain decentralisation-neutral reforms that were brought in with the BLGO 2001, including district government budgets and a Local Government Grants Committee headed by the Finance Minister⁴ (taking from Provincial Finance Commission instrument under the BLGO 2001).

Despite the current governance situation there is room for the IDDV to contribute to improved governance in the district through the following eight areas:

1. Consensus in planning, target setting and fund allocation;
2. Participation, particularly of women in decision making;
3. Equity and positive discrimination for the poor and vulnerable;

Table 1: Sabotage activities in Pishin

YEAR	Number and type of explosions				Persons killed	Persons injured
	BOMB BLAST	LAND MINE	HAND GRENADE	ROCKET FIRE		
2002	-	-	-	-	-	-
2003	-	-	-	-	-	-
2004	1	5	2	-	1	-
2005	2	-	-	-	1	2
2006	1	-	-	-	-	-
4 April 2007	-	-	-	-	-	-
Total	4	5	2	-	2	2

Source: Balochistan Disaster Risk Management Plan, 2006

³ Population Census Organisation (1998). District Census Report Pishin 1998. Islamabad, Pakistan: Government of Pakistan.

⁴ Secretaries Finance, Planning and Development and Local Government are the members of the committee. The Administrative Secretary of the Local Government Board is the secretary to this committee. The committee allocates development and non-development funds for local councils. Information provided on phone by Additional Secretary Finance Mr. Kaleemullah on 20 September 2011.

Box 1: Relevant GoP plans, policies and programmes

- Pakistan is a signatory to the Millennium Declaration. Importantly, for the purposes of the IDDV, many of these goals are to be implemented at the local level.
- Medium Term Development Framework, which is a five-year plan for 2005-2010.
- Poverty Reduction Strategy Paper, which provides a policy outline for poverty reduction and the achievement of MDG commitments.
- In 2007, the Planning Commission released 'Pakistan in the 21st century: Vision 2030', a roadmap for economic renewal.
- Integrated Water Resource Management Policy.
- Some national preventive health programmes in the district e.g. Expanded Programme for Immunization, T.B Control Programme, National Programme for Family Planning and Primary Health Care, Basic Development Needs and Malaria Control Programmes and Ministry of Special Initiatives Islamabad.

- | | |
|---|--|
| <p>4. Accountability and responsiveness to citizens;</p> <p>5. Effectiveness and efficiency in service delivery;</p> <p>6. Social accountability;</p> <p>7. Transparency of information; and</p> <p>8. Enforcement of laws.</p> | <p>Information System (GIS) portal in Pishin district with a management information system and website;</p> <p>b. Maintain electronic copies of records; promote, introduce and expand e-mail service in the areas where electricity and telephone facilities are available;</p> <p>c. Digitise and print all district maps and thematic data linked to the maps, improving efficiency and quality of decision-making;</p> |
|---|--|

1.3 Transparency

The Pishin District Government recognises that citizens have the right to be informed and access information in a legible form. The GoB's Balochistan Education Management Information System (BEMIS) and the Balochistan Health Management Information System (BHMIS)⁵, enable spatial and temporal data analysis, and have been extended to the district level.

The Pishin District Government is going to take the following steps to improve transparency:

- | | |
|--|---|
| <p>1. Establish accurate basic data on the district; create a consistent set of baseline indicators;</p> <p>2. Keep the citizens in the district informed of post BLGO 2001 dispensation;</p> <p>3. Design an information transparency strategy:</p> <p>a. Establish a simple Geographic</p> | <p>d. Link district data to relevant data portal (Pakistan Census Organisation, BEMIS, BHMIS etc.);</p> <p>e. Establish district information centres at the district, tehsil and union council levels;</p> <p>f. Make information on public dealing including district budgets, revenues and user fees visible in public places, such as health centres, schools, offices, police stations. Issue government information bulletins, and disseminate them through school teachers, health professionals, extension workers; and</p> <p>g. Disseminate the Freedom of Information Bill among citizens, NGOs, CSOs and the private sector.</p> <p>4. Establish a district monitoring and evaluation procedure and in particular,</p> |
|--|---|

⁵ In order to computerise and handle the enormous data at the provincial level, a basic Geographic Information System has been established to meet the overall needs of the province.

- prioritise community based monitoring and regulation of services;
5. Work with the media to ensure outreach and awareness and to ensure citizen feedback (extending coverage and access by radio, especially in the remote rural areas enhance airing and presenting relevant Pashtu programmes on radio and television; translating Pishin District Government’s IDDV into Urdu and distributing copies; keeping stakeholders informed about changes in the IDDV etc.);
 6. Work with the GoB to extend telephone (particularly mobile) and television coverage;
 7. Train all departments on freedom of information laws, regulations, and on the importance of communication and dissemination of information; and
 8. Undertake a capacity and training needs assessment for both the public and private sectors.

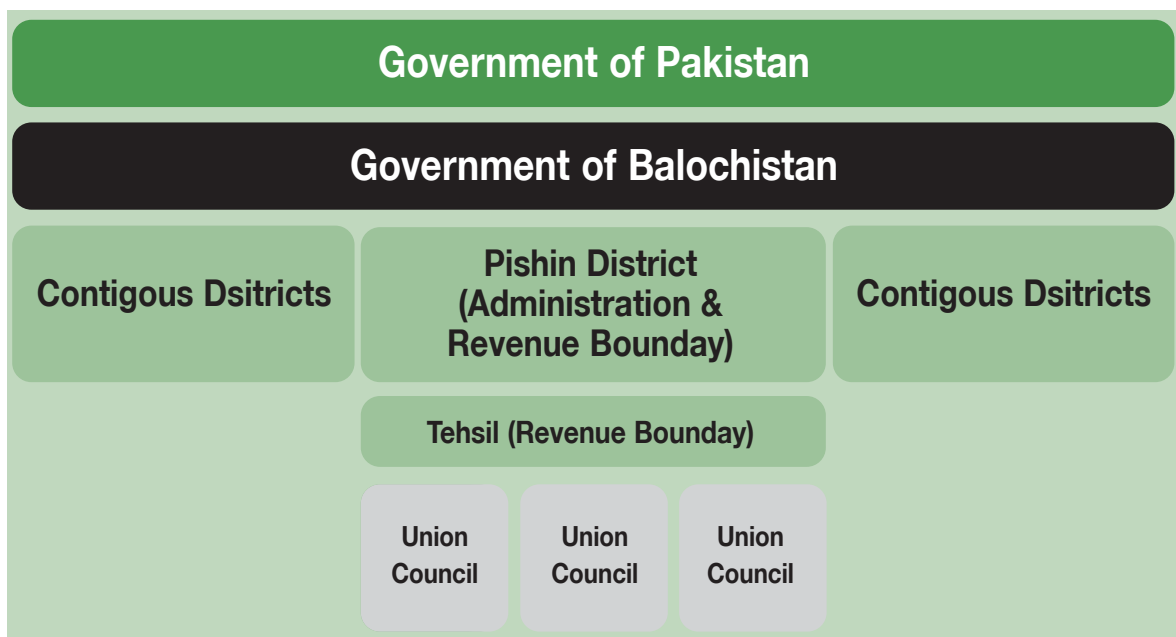
Pishin district has over 42 registered NGOs. Their sectoral scope includes: socio-economic and poverty alleviation, sports and cultural activities, awareness raising, capacity building, education, health, gender development, environment protection, women

and children’s welfare, credit facilities for industrial home activities, and prevention and management of substance abuse. The major NGO’s include BRSP, National Commission Human Development, SPO, Society for Community Support for Primary Education in Balochistan, Taraqee Foundation, Idara-e-Taraqiat-Niswan Bostan, Welfare Organisation Karezat and Barshore, and Training and Rehabilitation Centres for Poor Women. A large number of Citizen Community Boards (CCBs) were registered while the BLGO 2001 was effective. (See Annexe III for details)

1.4 Gender mainstreaming

Pishin District Government is committed to ensuring constitutional provisions for its citizens are enforced. The Constitution ensures that all citizens have equal rights and authorises the state to make special provisions for the protection of women and children. Women have the right to vote and hold office and are protected by the same labour laws as men. Women also have reserved seats in the National and Provincial Assemblies. Under the BLGO 2001, women had reserved seats in local governments; this had initiated a process of change that will hopefully be continued and strengthened in the forthcoming local government legislation.

Figure 2: Administrative and revenue hierarchy





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Very few girls have access to schools

In Pishin, although women comprised 53.47 per cent of the district's population in 1988⁶, the monopoly of economic and social power lies with men. Pishin has a patriarchal culture and women's share in decision-making and economic activities is limited; their participation in public life is negligible.

Women carry a disproportionately large part of the workload, since household activities (fetching water and fuel wood, cleaning, child rearing, washing, taking care of livestock etc) are the sole responsibility of women.

Although women contribute significantly towards household income and they are responsible for the households food and basic needs, they are denied property rights, receive less food, their access to medical care is more limited than that of men, their contribution to the agriculture sector is generally not accounted for, and under the jirga system they

are at times traded as commodities. A large number of women sew and embroider to enhance their income. Women also spend large amounts of time fetching water and fuel wood.

In Khanozai town, a rural area, there has been some improvement in the role of women due to a high literacy rate. The Social Welfare Department has organised training for some women's organisations in income generating activities, supported with a revolving fund.

In Pishin district:

- In 2004, birth care was provided to 56 per cent of mothers.⁷
- According to 1998 Census, the total fertility rate was 8.0 and the child to women ratio was 92.9. Contraceptive prevalence rate was 10.8 per cent, mainly in urban population.⁸ There was a very

6 Population Census Organisation (1998). District Census Report Pishin 1998. Islamabad, Pakistan: Government of Pakistan.

7 Government of Balochistan (2004). Multiple Indicator Cluster Survey 2004 [website]. <<http://balochistan.gov.pk/departments/mics/MICS-4-Web/4-6-Results-Child%20Protection.pdf>>. Accessed 10 October 2011.

8 Population Census Organisation (1998). District Census Report Pishin 1998. Islamabad, Pakistan: Government of Pakistan.

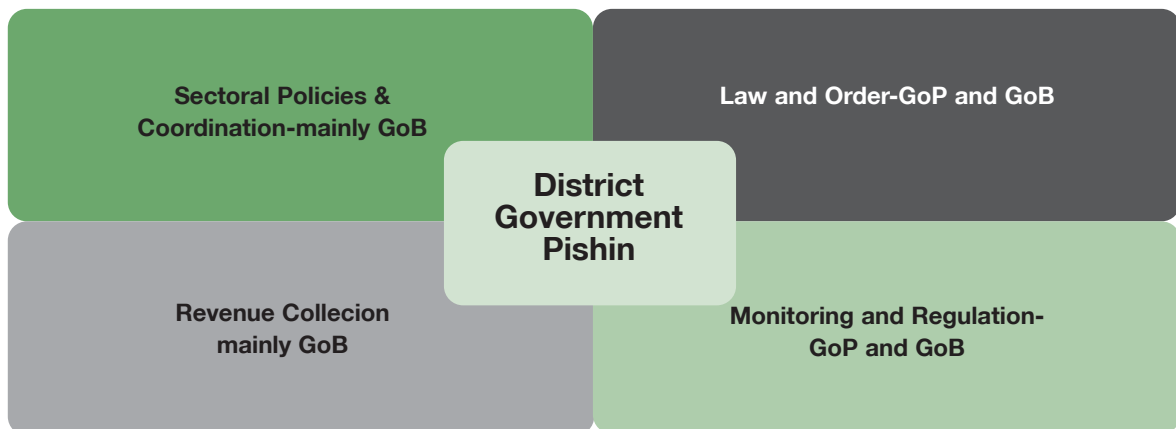
high dependant population, especially children below 15 years, due to negligible family planning.

- The female literacy rate is 13.4 per cent.⁹
- Number of educational institutions is 181 for girls and 656 for boys (Different sources quote different figures e.g. some sources quote 911 schools).¹⁰

Pishin District Government is committed to working towards the following goals:

1. Establishing a leaders forum where men and women sit together to discuss gender equity (Pishin specific issues, priorities and recommendations);
2. Ensuring inclusion of women in future decision making;
3. Ensuring all government procedures are gender sensitive;
4. Raising awareness on gender issues amongst a range of stakeholders;
5. Raising awareness on the economic contribution of women;
6. Facilitating Benazir Income Support Programme's (BISP) implementation as it provides financial incentives for women to register for the Computerized National Identity Card (CNIC). If families are eligible under the BISP scheme funds to meet basic needs are then transferred to the female head of household. This is a first step towards empowerment of women. Pishin District Government is committed to a 100 per cent registration of women for the CNIC and Census;
7. Encouraging girls education: increasing the pace in girls enrolment in urban areas; creating incentives for girls education; introducing scholarships for girls from middle school onwards; and establishing an educational boarding facility for girls;
8. Reviewing medical facilities availed for women;
9. Reporting cases of violence and harassment against women (enforcing the Prevention of Domestic Violence Act 2008 and Protection Against Harassment of Women at Workplace Bill 2010); and
10. Launching a reproductive rights and family planning campaign:
 - a. Initiating discussion with tribal leaders and community members on population control.
 - b. Employing the media as a key partner for raising awareness and awareness campaigns.
 - c. Improving service delivery by establishing maternity centres with 24-7 services; links to the Lady Dufferin hospital in Quetta; and improving services provided by Lady

Figure 3: District coordination and state governance functions



9 Directorate of Education (2008-09). Balochistan Educational Management Information System (2008-09)[website].<<http://www.bemis.edu.pk>>. Accessed 3 January 2012.

10 ibid.



© Yahya Musakhel

Damaged house due to earthquake at Khanozai, Pishin on October 29, 2008

Health Workers/Visitors (LHW/V) and Traditional Birth Attendants.

- d. Organising exposure visits of concerned government staff to other parts of Pakistan and other Muslim countries where family planning programmes have been implemented successfully.

1.5 Disaster risk mitigation and preparedness

According to the GoB's Disaster Risk Management Plan 2008, the risk and severity of the various hazards that threaten Pishin district are:¹¹

- Very High: earthquakes
- High: droughts
- Low: floods, locusts/pests

Emergency response machinery and equipment in Pishin includes three

ambulances, two fire brigades and 18 dozers. The climate of Pishin is generally dry and on the whole temperate. Different parts of the district do not present any marked variations.

The summer is the most delightful time of the year; winters can be bitterly cold. Pishin lies outside the sphere of monsoon currents.

The climate of Pishin valley is eminently suitable for growing fruits. However, it is not favourable for agriculture and rangelands. Further, owing to irregular rainfall farmers in rain-fed areas cannot plan crops properly, this in turn has led to non sustainable use of underground water (tube well).

Most of the roads in the district are shingle roads. Due to the dry climate they can be used throughout the year.

The major quantity of precipitation is received during winter months i.e. December-March. The months of May, June, October and November are the driest. The total monthly rainfall of the average for the period 1961-2004 was 247 mm with a maximum of 52 mm in January and a minimum of one mm in June.

11 Government of Balochistan (2006). Balochistan Disaster Risk Management Plan, 2006 [website]. <<http://unportal.un.org.pk/sites/UNPakistan/OneUN/DRM%20Documents/Balochistan%20Draft%20PDRM%20Plan.pdf>> Accessed 9 October 2011.

Relative humidity ranged from 28 per cent in June to 58 per cent in January. Snow occurs in between January and February.

The climate of Pishin district can also be unpredictable. In certain years, late frosts or hailstorms in spring damage the flowers and early fruiting of trees; droughts and erratic rains have been disastrous in the past. There is no weather station in Pishin district.

During the period 1961–2004, the temperature of neighbouring Quetta district (closest weather station) ranged from -2.30°C minimum to 36.20°C maximum. The hottest month was July (36.20°C) and the coldest January (-2.30°C).

1.5.1 Earthquakes

The whole of Balochistan lies in a seismically active region. The province has experienced catastrophic earthquakes in the past.

Many areas of Pishin district, in particular areas around Khanozai are vulnerable to earthquakes. The Suleiman range, a part of the Hindu Kush, which lies southwest of the Himalaya is tectonically active.

Major earthquakes in Pishin include Shahigh earthquake of 1931, Mach earthquake of 1931

and the Quetta earthquake of 1935. The Ziarat Earthquake in 2008, with a distantly located epicentre also affected Pishin district. Major recent earthquakes in Pishin include one in 1993 (5.7 on Richter Scale) and one in 2000 (6 on Richter Scale).

1.5.2 Droughts

The last drought, a province-wide one, lasted nearly six years (1998–2004). This drought is considered one of the worst in the recorded history of Balochistan.

Conserving water, water storage and a strategy to procure water for critical needs is important to cope with droughts. The situation was particularly grave during the prolonged drought, as livestock suffered the most, not only from shortage of forage and water but also from contagious diseases (e.g. foot and mouth disease). Communities had limited knowledge of treating sick animals and lost a lot of animals. Household incomes and nutrition levels dropped significantly.

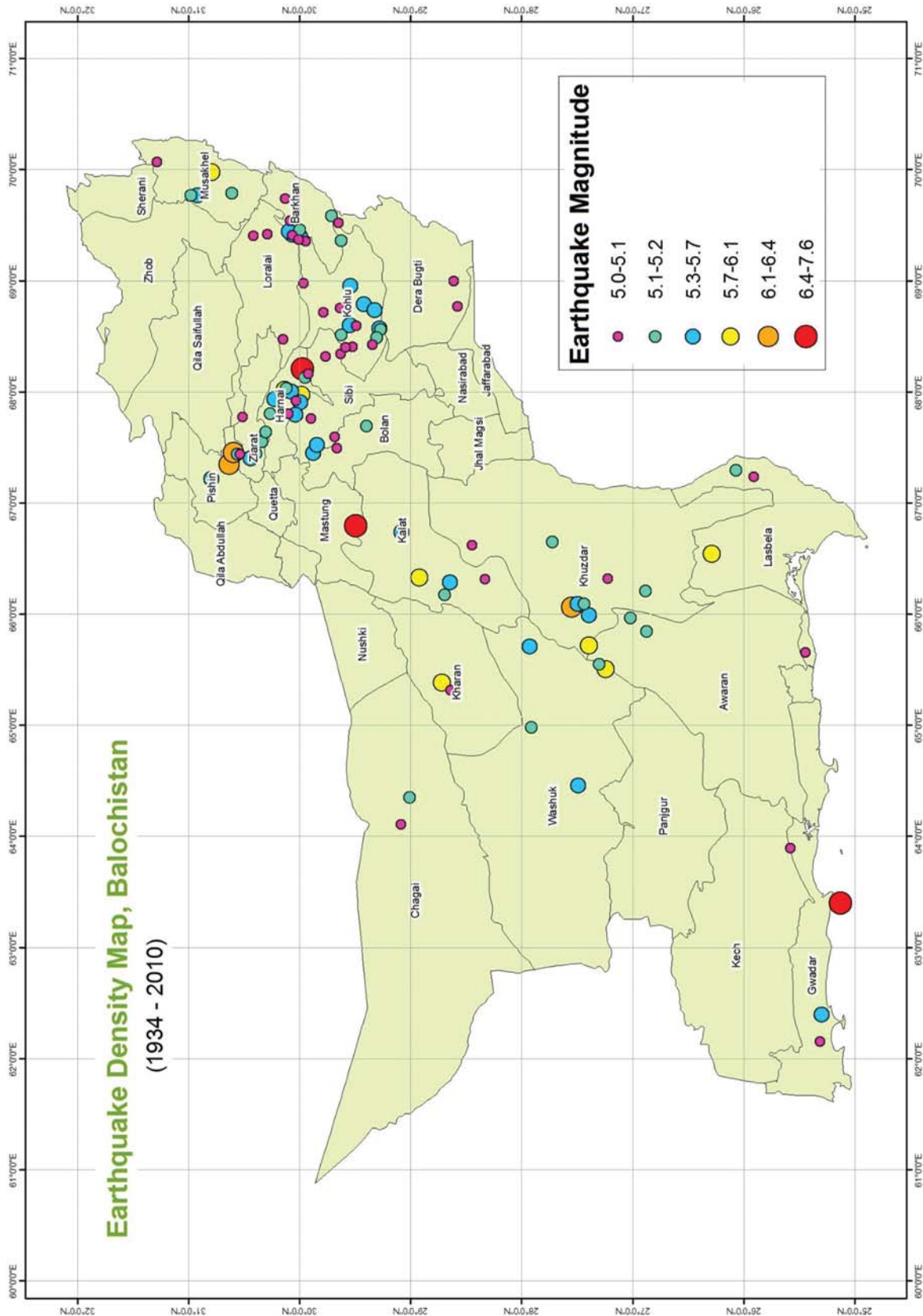
Karezat and Barshore tehsils were severely affected by the drought, whereas Pishin tehsil was moderately affected.¹²



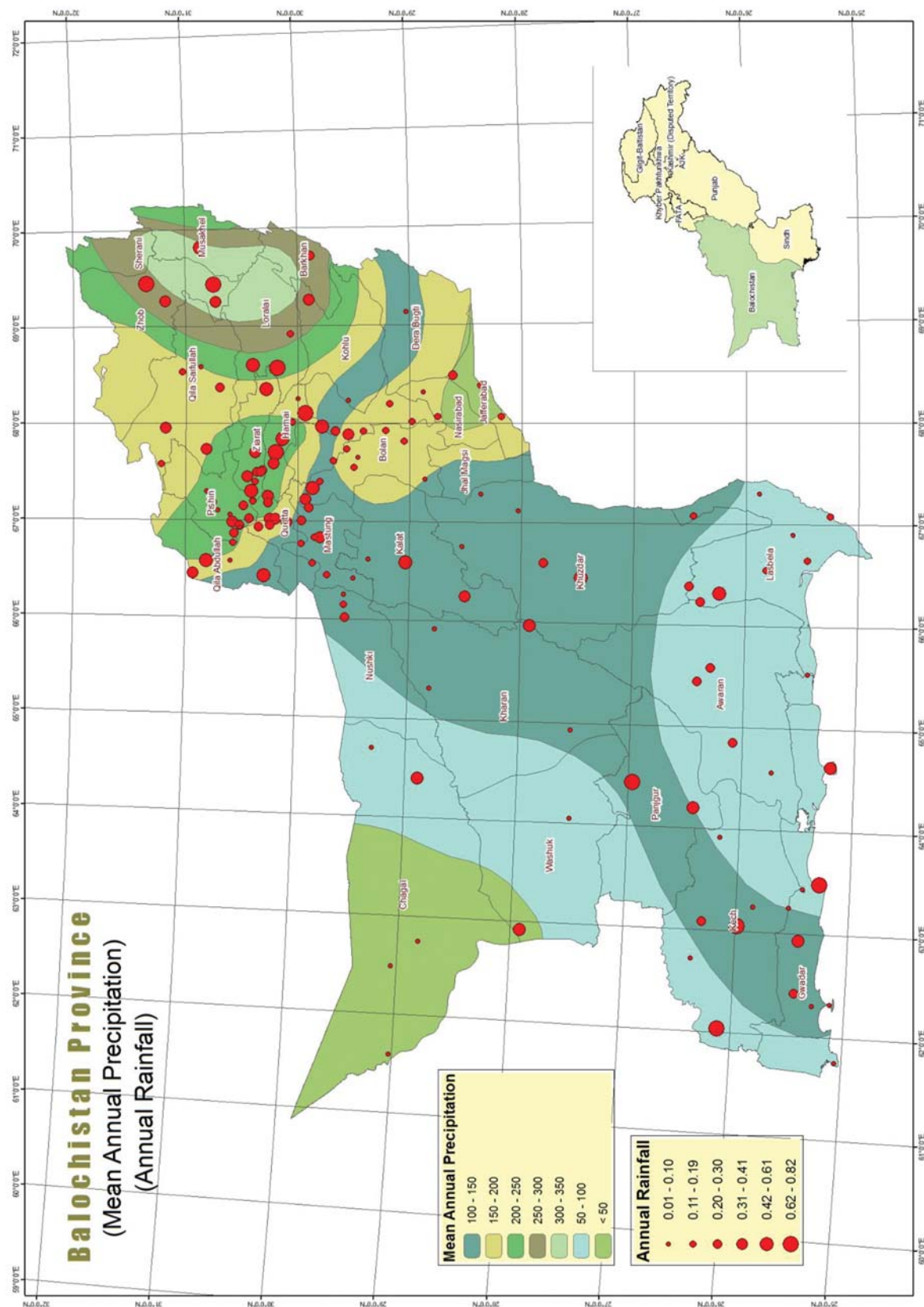
Bund Khushdil Khan, a drought-dried water storage dam

12 Government of Balochistan (2006). Contingency Plan for Drought Affected Districts of Balochistan 2006. Quetta, Pakistan: Government of Balochistan.

Map of Earthquake density of Balochistan



Map of Annual precipitation in Balochistan



1.5.3 Floods, cold waves and landslides

Floods are common in Pishin district, as the water recharge capacity of forests, rangelands and cultivated areas has decreased significantly. Occasional westerly disturbances during winter and spring bring rains to steep slopes and vast catchment areas.

Landslides are activated by: storms, earthquakes (as seen in the earthquake of 29 October 2010), fires, and steepening of slopes (by erosion or human modification for building of roads, housing or other infrastructure). Parts of Pishin are prone to flash floods during

heavy rains. The floods cause extensive damage to houses, standing crops, orchards, livestock and water supply schemes affecting thousands of people and settlements, while cutting and damaging road networks.

Heavy snowfall, albeit infrequently, and extreme cold can immobilise some parts of Pishin. Even areas that normally experience mild winters can be hit with major snowstorm or spells of extreme cold weather. Winter storms can result in flooding, storm surges, blocked roads, loss of power lines and hypothermia. Precautionary response measures can reduce damage to the health of citizens, livestock and natural resources.

Box 2: Disaster mitigation and preparedness in Pishin

The minimum elements for preparedness include drinking water for citizens and livestock, feed for livestock, marketing of livestock, prevention and control of livestock diseases, and fodder tree reserves.

Natural disasters have led to the following consequences in Pishin:

- Drop in household income.
- Loss of household assets.
- Rise in food prices.
- Malnutrition and vulnerability to disease.
- Fodder shortage.
- Substantive destruction of apple trees and orchards.
- Migration of people.
- Heavy cost of relief work.

Pishin District Government will lobby and work with the GoB on the following:

- Implement the provincial disaster risk management plan.
 - Establish a system on disaster preparedness.
 - Lobby for a drought emergency fund at the provincial and national levels.
 - Allocate specific responsibilities to different stakeholders.
- Conduct seismic briefings or trainings for all stakeholders including senior administrators, professionals, members of legislative assemblies, medical professionals, education professionals, grazers, farmers, the private sector, CSOs and citizens on preparation, coordination, information dissemination, relief and rehabilitation.
- Improve data and its interpretation particularly for early warning systems in Pishin; lobby for direct information from relevant organisations/agencies.
 - Establish a satellite monitoring system for early warning of droughts, and interpretation of data and dissemination of information.
- In Pishin, plan for landslides at vulnerable places and keep the relevant machinery and equipment ready for clearing the affected areas, in particular highways, roads, bridges etc.
- Reconstruct affected villages, ensure proper town planning, based on geo hazard-zone mapping (including the local geology, geomorphology, geohydrogeology, and geotechnical investigations).

- Evaluate flash floods and landslide hazards and design corrective techniques to reduce risk in Pishin.
- Prepare Climatic Moisture Index and Soil Moisture Index maps for Pishin with the help of remote sensing.
- Establish facilities for the development and marketing of livestock products from Pishin (refrigeration of large quantities of meat are lacking currently, even at the provincial level).
 - Arrange mobile refrigerated meat storage vans during droughts along with set purchase prices to motivate owners to slaughter and sell their livestock, before they die because of drought or disease.
- Agree on an emergency drinking water plan for Pishin (for citizens and livestock).
- Build and operate a weather station in Pishin.
- Collate and disseminate reliable data on temperature, precipitation, run-off, recharge, soil moisture and ground water which are needed to determine the impact and intensity of droughts.
- Design roads and bridges in Pishin keeping in view vulnerability to flash floods and landslides.
- Retain waterways in their original dimensions in Pishin in order to allow for increased discharge of rainwater during flash floods.
- Develop forest plantations in Pishin of multi-purpose fast growing forest species (for fodder, fuel, control of soil and bank erosion, water recharge, enhanced biodiversity, and fodder tree groves for use for fodder/fuel only during long drought periods).
- Introduce and manage high protein molasses blocks for winter feeding and drought periods in Pishin.
- Improve housing construction techniques keeping in view vulnerability to earthquakes and cold waves in Pishin.
- Promote diversified livelihoods.

2. Population settlement patterns

The district should urbanise as per a plan that addresses opportunities for livelihood diversification, the empowerment of women, and substantive reduction in unit cost of services while minimising concerns such as slum development, congestion, and pressure on social services.

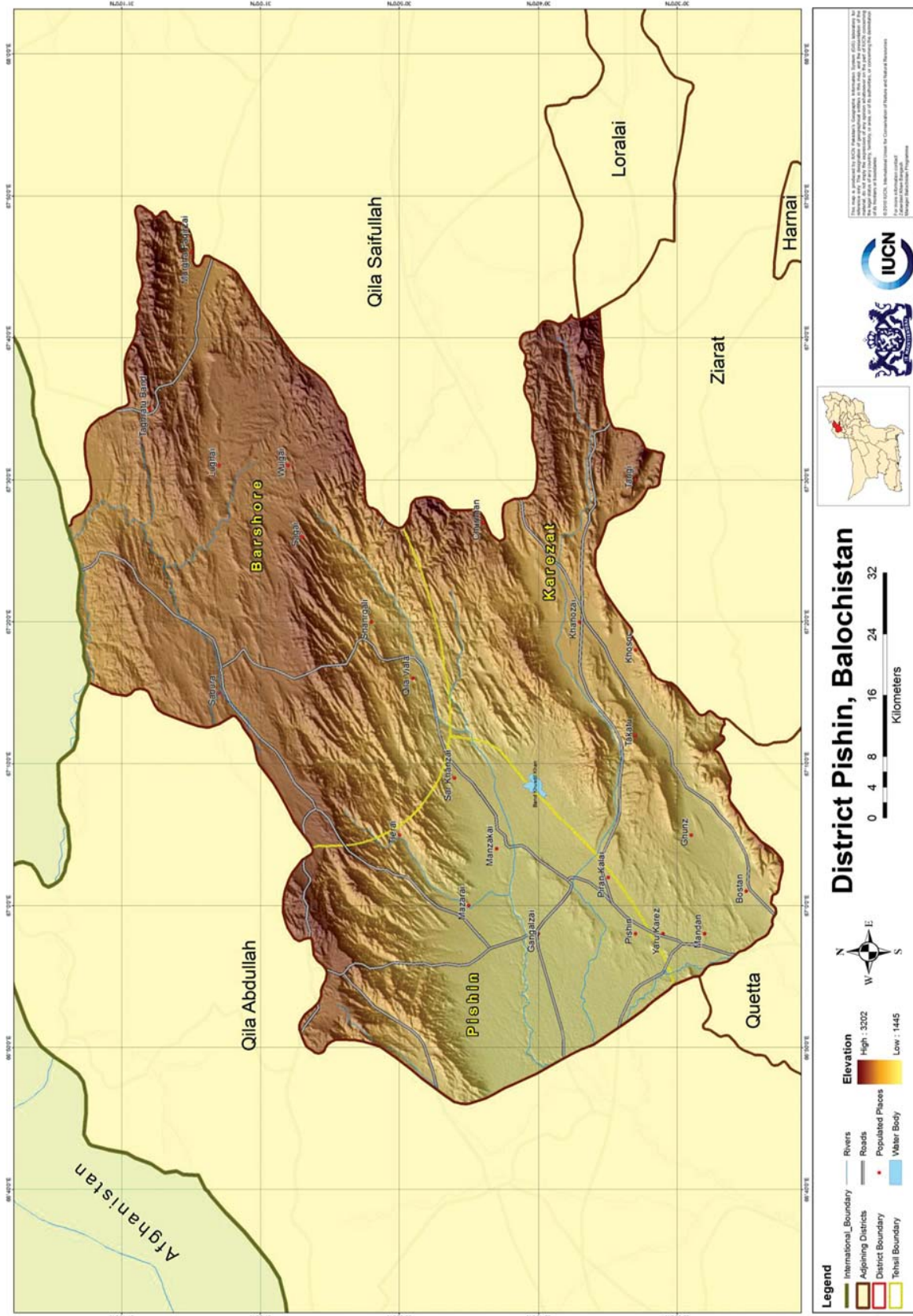
Pishin District Government is going to prepare a strategy for district wide population settlement within one year. Pishin District Government plans to prepare strategic plans (including zoning, land use, markets, social sector infrastructure, protection of natural resources etc.) for Pishin town and for the larger rural settlements. It will also propose the demarcation and notification of urban areas to the Population Census Organisation. Pishin still has an opportunity to establish planned mid-level towns.

The plans will include:

1. Land use planning and development planning control in Pishin Town and big villages;



Map of Pishin district





© IUCN, Balochistan Programme

A view of Pishin Bazar

- a. Ribbon-growth along roads and highways.
 - b. Refugee camps.
 - c. Traffic and transport management.
 - d. Regulations for e.g. most of the brick kilns have been moved out of Quetta and are largely found around Yaro.
2. Social sector plan including education, health, and water and sanitation;
 3. Integrated water resource management plan;
 4. Livelihood diversification plan; and
 5. Agriculture and livestock plan. [The northern and central parts of Pishin Tehsil are generally flat lands, which are well suited to agriculture (subject to the availability of water). Bund Khushdil Khan has special significance especially for agriculture, and as a wetland including for migratory birds].

According to the 1998 Census, the population of Pishin district was 367,183 persons. In addition there are close to 150,000 Afghan refugees.¹³ Additionally, nomads from Afghanistan, and their livestock, migrate into and through the Toba Kakari highlands to spend the winter in Balochistan.

The major tribes in the district are: Kakar, Tarin, Syed and Achakzai. Among the landowners and traders are: Tarins, Kakars and Syeds. Pashto is widely spoken, while Urdu is also spoken in urban areas.

In 1998, the total number of rural localities was 386 with a total population of 344,228 (183,894 male and 160,334 female) in Pishin district. According to the Census, of the district's population (367,183) 22,955 (6.3 per cent) were urban and 344,228 (93.7 per cent) rural. The sex ratio of males per 100 females is 114.9. Pishin town was the only urban area in the district in 1998 with a population of 22,955 comprising of 12,436 males and 10,519 females.¹⁴

¹³ The largest and longest migration of Afghans was witnessed during the early 1980's during which 156,000 Afghans were registered and accommodated in Surkhab Camp along Pishin-Khanozai Road. A large number of the refugees however remained unregistered. The majority of the former registered refugees have been repatriated while most of the unregistered are believed to have settled in the district.

¹⁴ Population Census Organisation (1998). District Census Report Pishin 1998. Islamabad, Pakistan: Government of Pakistan.

In recent years, major anomalies in population estimates have come forward. Vested interest groups exaggerate their numbers for political and economic benefits; and there is a tendency particularly in rural areas to conceal the actual number of females. There is no proper registry for births and deaths although the municipal administration and District Council should keep these records.

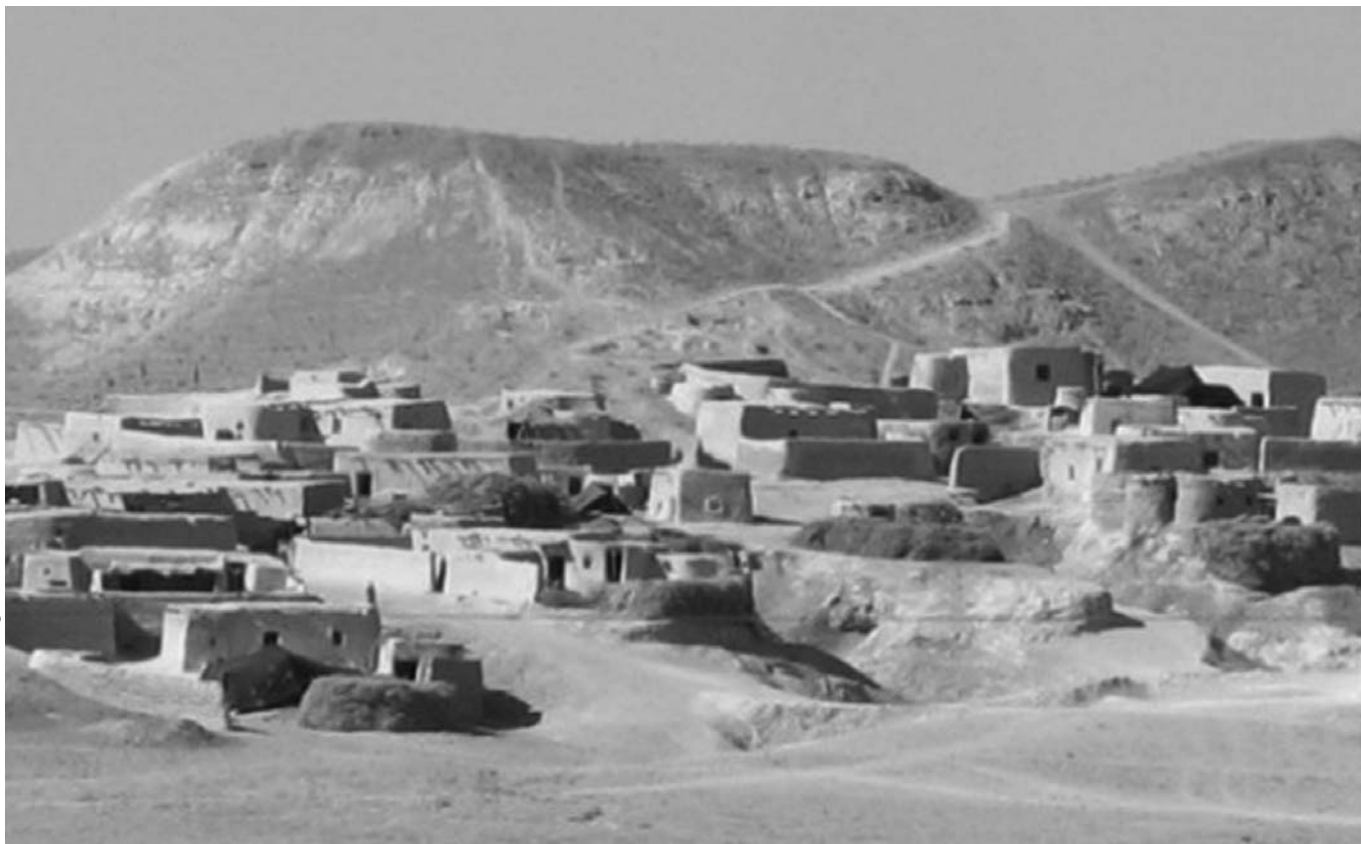
About 88 per cent of the population lives in 386 villages. According to the National Institute of Population Studies (NIPS) projection, the population in Pishin district is growing at the rate of 3.2 per cent per annum. The population size and average growth pattern in the district varied during different census periods. The average growth rate from 1981 to 1998 was 3.57 per cent. However, this may be due to the fact that in 1993, Pishin district was bifurcated into Pishin and Qila Abdullah districts. The average annual growth rate during 1961-1971, 1972-81 and 1981-1998 was 6.1 per cent, 5.1 per cent and 3.57 per cent respectively.¹⁵

2.1 Housing and settlement

In the urban areas of Pishin, the increase in population and rural-urban migration has worsened the housing problem. The housing facilities in Pishin district are inadequate and of substandard quality. Streets are generally narrow and there are no streetlights. Most of the houses are constructed with mud and unbaked bricks, without proper toilets and drainage facilities. The houses are constructed without any planning or design or without the approval of the municipal administration.

There were 54,048 housing units in Pishin district in 1998, 51,520 in rural (95.32 per cent) and 2,528 (4.68 per cent) in urban areas.¹⁶

In Pishin district, about 6.03 per cent of the housing units have the standard *pucca* walls made of baked bricks/blocks and stones with cement bonding compared with only 4.77 per cent in rural areas. In Pishin district, more than



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A small settlement of Batayzai near Pishin city

91 per cent housing units in the rural areas and 67.68 per cent in urban areas have used baked bricks supported by wooden beams and planks or girders. 4.02 per cent houses have roofs made of cement etc (3.31 per cent rural and 18.51 per cent urban). 85.19 per cent of the walls are made of un-baked bricks with mud bonding. The vulnerability of the latter in case of earthquakes is very high as was seen in 2008.

The population density of 37.5 persons per km² in 1981 increased to 46.96 persons per km² by 1998. Pishin Town and its surrounding areas are densely populated. The average household size during the 1998 census was 9.1 persons. The villages in Pishin district range from 30 to 300 households.

According to the District Census Report (1998), all housing units had kitchens, bathrooms and a separate or shared latrine. The majority of the population, 66.72 per cent, lives in two to four room houses. According to the Multiple Indicators Cluster Survey (MICS) (2004), in Pishin district, there were 3.1 persons per room, the percentage of population with one room houses was 0.9 per

cent. The percentage of households with access to piped water was 47.9 per cent. 23 per cent of households had adequate sanitation facilities, 78.4 per cent of households had electricity, the percentage of households with access to radios was 45.4 per cent and percentage of household with access to television was 8.9 per cent.

In rural areas, the quality of construction is not good and although houses are spacious they lack proper sewerage and sanitation systems. *Kacha*, mud houses or unbaked bricks are a common sight in rural areas. The majority of the population is settled in *killies*/villages. Both in rural and urban areas people generally own the houses where they live.

In Pishin district, electricity was provided to 78 per cent houses, gas to 21 per cent houses, telephone to 23 per cent, water connections to 63 per cent, and 82 per cent houses had one utility. Possessions in houses included refrigerators or freezers (7 per cent); washing machine (37 per cent), radio (45 per cent), television (9 per cent), and personal computers (0.8 per cent); there were 60 per cent houses with at least three possessions.¹⁷

17 Government of Balochistan (2004). Multiple Indicator Cluster Survey 2004 [website]. <<http://balochistan.gov.pk/departments/mics/MICS-4-Web/4-6-Results-Child%20Protection.pdf>>. Accessed 10 October 2011.

Table 2: Pishin at a glance

Area	7,819 sq.. km
Demographics	
Population - 1998	367,183 persons
Male	196,330 (53.47%)
Female	170,853 (46.53%)
Sex Ratio (males per 100 females)	114.9
Population Density	47.0 per sq.. km
Urban Population	22,955 (6.25%)
Rural Population	344,228 (93.74%)
Average Household Size	6.8
Population - 1981	202,256 persons
Average Annual Growth Rate (1981-98)	3.57%
Literacy	
Literacy Ratio (10 +)	31.1%
Male	47.2
Female	13.1%
Housing Units	
Total Housing Units	54,048
<i>Pacca</i> Housing Units	3,189 (5.90%)
Housing Units having Electricity	40,848 (75.57%)
Housing Units having Piped Water	27,261 (50.44%)
Housing Units using Gas for Cooking	3,820 (7.06%)
Administrative Units	
Sub-Divisions	03
Union Councils	26
<i>Mauzas</i>	386
Town Committees	01

Source: Population Census Organization, 1998

3. Social sectors

Pishin district is ranked seventh according to the MICS, 2004.

3.1 Education

The literacy rate in the district is 31.4 per cent (male literacy rate is 47.29 per cent, and the female literacy rate is 13.15 per cent). There are around 800 schools in the district.¹⁸

Mohallah or home schools, 37 mosque schools¹⁹ (primary level) and a small number of primary schools are managed by the private sector. Some of the government's primary schools are provided some assistance by international donors and NGOs. Vocational training, middle schools, high schools, colleges, and teacher training institutes are mainly managed by the GoB.



¹⁸ Directorate of Education (2008-09). Balochistan Educational Management Information System (2008-09)[website].<<http://www.bemis.edu.pk>>. Accessed 3 January 2012.

¹⁹ *ibid.*

In Pishin district all government primary, middle and high schools teach in Urdu. Only one private middle school teaches in English. There is no technical school, polytechnic institute or college in Pishin.

The District Education Officers, one male and one female, are in charge of all government schools for boys and girls. In 2008-09:

1. There were 911 schools (665 for boys and 246 for girls) [please note different sources quote different figures]. Total enrolment in government schools was 67,917-43,508 males and 24,409 females;
2. Enrolment in primary schools was 38,336 including 23,491 and 14,845 females. Teaching staff of primary schools was 880 males and 454 females;
3. There were 87 middle schools in Pishin, 53 for boys and 34 for girls. The total enrolment for middle classes up to 2008 was 15,267, of which 9,053 were boys and 6,214 girls (59 per cent boys, 41 per cent girls). There were 533 male and 261 female teaching staff;
4. There were 33 high schools in Pishin, 28 for boys and five for girls. The total

enrolment was 12,861. The number of girls was 2,825 (15 per cent) while the number of boys was 10,036 (85 per cent). The examining body for high school students is the Balochistan Board of Intermediate and Secondary Education in Quetta. There were 569 male and 154 female teaching staff in high school;

5. There are over 232 shelter-less schools in the district;
6. 92 per cent of the schools were located in villages where students resided, 97 per cent were within two kilometer of students residences²⁰; and
7. The total enrolment of 63,942 students in 2002 increased by 6.22 per cent in 2008 to 67,917. Male students increased from 36,422 in 2002 to 43,508 i.e. an increase of 19.46 per cent; and female students from 17.07 in 2002 to 24,400 in 2008 an increase of 42.96 per cent, which is significant.

The involvement of the private sector is very low. International donors have been helping by creating an enabling environment, especially for primary and girls education in rural areas.



Morning session in progress at a school in Pishin

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District Headquarter hospital, Pishin

3.2 Health

In Pishin, in addition to allopathic doctors, *hakeems*, and homoeopaths also treat patients. A number of quacks are also active. Women's health in Pishin district is poor. The health status of migrant females is believed to be even worse. There is no data available regarding their calorie intake.

In Pishin district the Executive District Officer Health supervises health services, vaccination programmes and regulates medicines. The Medical Superintendent is in charge of the District Headquarter Hospital.

In the year 2006-07, health facilities in the district included:

1. 45 bed District Headquarter Hospital Pishin;
2. 29 Basic Health Units;
3. Six Rural Health Centres, ten beds each (60 beds in all);
4. 19 civil dispensaries;

5. Four Mother and Child Health Centres;
6. Nine health auxiliaries;
7. One TB clinic;
8. One mobile health unit;
9. Three school health service units;
10. In the private sector there were only two hospitals with ten beds; and
11. There are also Expanded Programme on Immunization (EPI) Centres, family welfare clinics, family planning clinics, and nurse training schools in the district.

Out of 69 doctors in the district, 55 were male and 14 female; of seven nurses, two were male and five female; there was one pharmacist, 40 LHW/V and 62 *daees*/midwives.

In 2007, 220,410 outpatients were treated in hospitals and dispensaries including 103,828 males and 116,582 females. 195,835 new cases included 91,688 males and 104,147 females; in addition to 24,575 old cases (12,140 males and 12,435 females).²¹

21 Directorate of Health (2008-09). Balochistan Health Management Information System (2008-09) (no further information).

According to the MICS (2004), 46 per cent mothers received antenatal care from a skilled health worker in Pishin; 38 per cent mothers got post birth care by skilled attendants; skilled attendants provided 8 per cent mothers with information on HIV/AIDS.

Eight per cent of babies who were born were underweight; 91 per cent of females were covered by LHW/V; 95 per cent mothers breastfed their children. 17 per cent children suffered from some kind of illness (12 per cent diarrhoea, six per cent cough with difficulty breathing, three per cent from high fever); 30 per cent used ORS/ORT; 65 per cent consulted some health provider; 29 per cent consulted a government facility; and two per cent were admitted to the hospital.²²

Normally, two types of health services are provided in the district, curative and preventive. Immunisation coverage is around 57 per cent according to the health authorities.

Preventive health and child protection in the year 2004 was as follows: between the ages of 12-23 months, 23 per cent children were fully immunised, 18 per cent partially immunised and 59 per cent were not

immunised.²³ In 2007, examination of 7,078 blood slides was conducted for malaria control. 1,204 were diagnosed suffering from malaria and were treated successfully. 102 children up to 11 months age were immunised against BCG, 87 for OPV/DPT-3 and 69 for measles under EPI.

MICS (2004) reported that 44 per cent children had BCG scars, only 0.2 per cent children under five years of age were registered for protective care, whereas 0.1 per cent children between the ages of 10-14 years reported labour related hazards.

Exact data on maternal and infant mortality is not available, however they are reported to be very high. There are 62 trained Traditional Birth Attendants in Pishin district.

The most common diseases are respiratory diseases, anaemia, skin infections, renal diseases, worm infections, diarrhoea, dysentery, malaria and hepatitis.

The number of patients suffering from suspected cholera, suspected meningococcal meningitis, poliomyelitis, measles, neonatal tetanus, diphtheria, whooping cough, goitre, viral hepatitis, AIDS and snake bite were not recorded or reported separately.



© IUCN, Naseebullah Khan

Lack of sewerage and sanitation facilities in Pishin town

²² *ibid.*

²³ World Health Organization (WHO); United Nations Children Fun (UNICEF). Expanded Programme on Immunization [website]. <http://www.emro.who.int/publications/emhj/16_Supp/article4.htm>. Accessed on 9 October 2011.



PHE water supply tank, Pishin

There are a number of special health services provided by the government to improve or facilitate health programmes, one of which was the Prime Minister's Health Care Programme. Its objective was to provide affordable health services to the community for primary health care, mother and childcare, (nutritious food, subsidised family planning medicines, and other essential drugs.

3.3 Drinking water

In Pishin district the quality of ground water varies from place to place. In Karezat sub-*tehsil* from Qili Qasim Bostan to Choormian, the water quality is good, whereas in Pishin bazaar and its surroundings, the quality of water is poor. In other areas like Saranan, Hackalzai, Khudaidad-dad-zai, Karbala, Shadzai and Davian the quality of water is very poor (saline or brackish) and not potable. According to the Public Health Engineering Department (PHED), 57 per cent of the population (this does not measure quantity or quality) has access to drinking water.

Large number of people in rural areas depend on water from ponds and other un-hygienic sources. In Pishin town, water supply is the responsibility of the Town Committee.

In Pishin district, water is supplied through different sources: tube-wells, hand pumps, wells, *karezes* and springs. Tube-wells have by far become the major source of water. All the schemes run by PHED are 100 per cent piped schemes. These facilities have been provided in 88 densely populated areas. Of all connections, 90 per cent are for households and 10 per cent are for commercial purposes (NB: PHED and other data sources need to be reconciled).

Ground water is the main source of drinking water in the district. Of the district's total population, 40 per cent have access to potable water supplied by PHED. Out of the 88 PHED water schemes, 38 have been handed over to the community. Some have been given to contractors. This is because schemes are often overdesigned, not demand driven and attention is not paid to per unit cost of operation. Communities do not want to accept liability for the schemes and users do not want to pay high user charges.

57 per cent of the population in Pishin district had access to improved resources of drinking water, 49 per cent households had this access, and 52 per cent had access within one kilometer distance or half-an-hour return travel time. Improved sources of drinking water included:

1. Piped water (47.9 per cent);

2. Public stand pipe or tap (0.9 per cent);
3. Hand pump (0.1 per cent);
4. Lift pump/turbine (1.3 per cent);
5. Protected dug well (6.4 per cent);
6. Water supply from unimproved sources was obtained from river/canal system (1.4 per cent);
7. Vendors providing (1.8 per cent);
8. Tanker/tractor/donkey cart (0.6 per cent); and
9. Bottled water/can/vessel (4.2 per cent).

3.4 Sanitation

Public health conditions in the district are unsatisfactory due to unplanned urban growth and the absence of a proper sewerage systems. Of the 57 per cent population that had an improved water source, only 2 per cent disposed wastewater safely. Adequate sanitation is provided to 23 per cent of the population. 91 per cent of the population wash their hands before eating, whereas 21 per cent wash hands after returning from the toilet.²⁴

In a sample size of 374, 0.2 per cent toilets are connected to public sewers, 0.6 per cent connected to septic tanks, 7.9 per cent have pour flush toilets, 0.8 per cent have ventilated improved toilets, 12.7 per cent have traditional (closed) pit latrines, 0.3 per cent use bucket latrines, 0.1 per cent use the public/communal latrines whereas 77.5 per cent defecate in open spaces.²⁵

In Pishin and Khanozai town, households link their flush systems with septic tanks. Wastewater from the houses is disposed of through open drains, moving into a water body. In urban areas, like Pishin Bazaar, water is drained out through cemented outlets into the Pishin Loralai Basin.

The hygiene conditions are poorer still in the rural areas of Pishin district. The streets are unpaved and without drains. Wastewater stagnates outside houses, breeding mosquitoes and flies.

In recent years, some international donor agencies have provided financial and technical assistance to communities in some areas in order to improve sanitation.

24 Government of Balochistan (2004). Multiple Indicator Cluster Survey 2004 [website]. <<http://balochistan.gov.pk/departments/mics/MICS-4-Web/4-6-Results-Child%20Protection.pdf>>. Accessed 10 October 2011.

25 Government of Balochistan (2004). Multiple Indicator Cluster Survey 2004 [website]. <<http://balochistan.gov.pk/departments/mics/MICS-4-Web/4-6-Results-Child%20Protection.pdf>>. Accessed 10 October 2011.

Box 3: Pishin social sector plan – education

Objective: Ensure access and quality education in Pishin; Meet the MDG targets as applicable to Pishin.

The scope of the Pishin Education Plan will be:

- Map and compile directory of existing stakeholders and service providers.
- District map showing existing infrastructure (including functional and non functional):
 - Ghost schools; defunct schools; functional public sector schools.
 - Private schools.
 - *Deeni Madaris*.
- Establish principles and working policies for Pishin.
- Agree on indicators for the purpose of monitoring; establish a baseline for these indicators in Pishin:
 - Household income disparities.
 - Gender disparities.
 - Urban-rural disparities; sub-*tehsil* disparities.
 - Standardised indicators for shortage of schools, colleges and higher education institutions.
 - Standardised indicators for shortage of teachers, particularly female teachers.
 - Teacher quality as measured in results and outcomes. Qualitative feedback from parents, principals, teachers, students on standardised questions.
 - Standardised indicators for quality of building and built infrastructure (availability of toilet, boundary walls in girls schools, sports etc).
 - Standardised indicators for desks and chairs.
 - Standardised indicators for books and teaching aides.
 - Standardised questions for qualitative feedback from community representatives, tribal leaders, parents, mothers and children on low enrolment and drop out rates.
- Assess current and projected needs for Pishin.
- Review MDGs and National Vision 2030 targets as applicable to Pishin.
- Implement measures to raise awareness on education as a human right in Pishin.
- Focus on access to education for children from poor families and girls in particular in Pishin:
 - Reach out to families which cannot afford schooling with free schools, free uniforms, hygiene kits and stipends for girl children.
 - Offer scholarships to gifted students.
- Evaluate the work, contribution and impact of different service providers in Pishin:
 - Enforcement of traditional supervisory visits, participatory monitoring, and effective application of BEMIS.

- Identify means to improve teacher-child ratio (e.g. address high logistic and travel cost).
- Include measures to ensure security for educational establishments in Pishin district.
- Effective coordination between Pishin district and GoB on:
 - BEMIS.
 - Teacher training; training of local literacy enhancement staff, refresher courses.
 - Merit based appointments.
 - Review of ratio of operational: non operational expenses and salary: non salary expenses.
 - Performance based salary system.
 - Financial incentives for working in remote areas.
 - Separate wings for girls in colleges.
 - Security and accommodation for female teachers.
 - Upgrading single teacher schools to multi teacher schools.
 - Community managed monitoring systems (creating real time links with BEMIS).
 - Scholarships to teachers.
 - A secure work environment for women.
 - Construct boarding houses for students and teachers.
 - Collaborate with the Balochistan Education Fund.
- Improving governance, accountability and participation in Pishin by:
 - Replicating the good practice model from Qila Saifullah where community elders identified good teachers, lobbied for their transfer to their areas, and have assured the teachers housing and protection.
 - Disseminating information regarding funds and their application.
 - Regulation of private schools (a) fees (b) quality of education (c) facilities (d) faculty (e) bringing *deenis madaris* into the mainstream education system.
 - Establishing platforms for engaging with parents, civil society and private sector organisations; and establishing Parent Teacher Associations.
 - Piloting projects in collaboration with NGOs/CSOs and private sector (e.g. literacy with a particular focus on women's literacy).

Box 4: Pishin social sector plan – health

Objective: Ensure access to primary and preventive health care for all in Pishin; meet the MDG targets as applicable to Pishin.

The scope of the Pishin Health Plan will include:

- Map and compile a directory of existing stakeholders and service providers in Pishin:
 - District map showing existing infrastructure (functional and non functional).
- Review existing facilities, establish a criteria for continuing with or closing facilities, explore optional applicability for these facilities.
- Assess current and projected needs for Pishin.
- Establish principles and working policies for Pishin.
- Identify indicators for the purpose of monitoring, establish a baseline for these indicators for Pishin:
 - Household income disparities.
 - Gender disparities.
 - Urban-rural disparities; sub-*tehsil* disparities.
 - Intra rural disparities.
 - Age disparities.
 - Standardised indicators for shortage of health facilities and services.
 - Standardised indicators for health and allied health professionals/services.
 - Health care service quality as measured in results and outcomes and qualitative feedback from care givers and patients on standardised questions.
 - Standardised indicators for quality of building and built infrastructure (availability of toilet, boundary walls etc).
- Strategy for maternal health, reduction in child mortality and arresting the spread of communicable diseases; increasing immunisation coverage through the LHW/V programs for Pishin:
 - Standardised indicators for maternal health, child mortality.
 - Standardised indicators for communicable diseases and immunisation coverage.
 - Standardised indicators for public health.
 - Standardised indicators for non-communicable diseases for e.g. mental health and nutrition.
- Strategies for preventive, primary and secondary health care services at the district level, and links for patients from Pishin with tertiary health facilities in Quetta city:
 - Preventive health care will include mental health, awareness raising, vaccination, safe drinking water and sanitation, safe disposal of wastes (solid, hospital, mining and industrial) and control of air, water and noise pollution.
 - Awareness on contagious and communicable diseases including HIV/AIDS, hepatitis etc.
- Strategy for the distribution of fortified food and health supplements particularly to women and children in Pishin.
- Agreements with private sector to transport patients from Pishin to Quetta.

- Promotion of smoke efficient stoves and latrines both of which would have a significant impact on women and child health in Pishin.
- Creation of an enabling environment for and incentives for the private sector for providing affordable health care services in Pishin.
- Motivate and provide incentives to the medical and paramedical staff to work in remote rural areas. These may include economic incentives and security and facilities such as transport and accommodation, especially for female staff in Pishin.
- Action Plan for hospital/medical waste management for Pishin.
- Action Plan for cleaning of ground water (agro chemicals, sewage, waste from mining etc) for Pishin.
- Strategy to improve human resources and their management, counter absenteeism, fill vacant posts and recruit female staff in Pishin.
- Lobby with the GoB for the following in Pishin:
 - Improved coordinations with BHMIS.
 - Refresher and training courses for staff.
 - Performance based salaries.
 - Community managed monitoring linked to financial incentives.
 - Preference to O&M over capital expenditure.
 - Strong monitoring and evaluation systems.
 - Improved supplies of medicines (coordination with the Essential Drug Programme).
 - Identifying a clear role for indigenous medicine.
 - Improved coordination with special health services provided by the GoB to improve or facilitate health programmes.
- Improving governance, accountability and participation in Pishin:
 - Disseminate information regarding funds and their application.
 - Regulate private medical services (a) fees (b) quality of health care (c) facilities (d) faculty (e) bringing *indigenous medicine* under a regulatory framework.
 - Establish platforms for engaging with, civil society and private sector organisations; establish networks for doctor, nurses, LHW/V, and Trained Birth Attendants.
- Pilot projects in collaboration with NGOs/CSOs and private sector in Pishin.

Box 5: Pishin social sector plan – water and sanitation

Objective: Ensure access to safe drinking water and adequate sanitation facilities for all in Pishin; meet the MDG targets as applicable to Pishin.

The scope of the Pishin Water and Sanitation Plan will include:

- Directory and map of stakeholders and services.
 - District map showing existing infrastructure (including functional and non functional, informal and formal).
 - Detailed maps of built schemes.
- Principles and working policies for Pishin:
 - Review of existing facilities, establishment and enforcement of criteria for continuing with or closing down schemes/services.
- Indicators for the purpose of monitoring, establish a baseline for these indicators, establishment of targets for Pishin:
 - Unaccounted for water and non revenue water.
 - Willingness to pay.
 - Unit cost of operating PHED and Clean Drinking Water Program built schemes.
 - Ratio of built to functional schemes and infrastructure.
 - Gender disparities in access and workload for collection of water.
 - Standardised indicators for quality of and built infrastructure.
 - Urban-rural disparities; sub-*tehsil* disparities; intra rural disparities; age disparities.
 - Public health indicators.
 - Quality of services as measured in results and outcomes and qualitative feedback from citizens on standardised questions.
- Strategies for ensuring the following in Pishin:
 - A minimal amount of water available to all (hand pumps where water table is within 50 feet).
 - Installation of water treatment facilities at distribution or reservoir points.
 - Reduce loss during transmission.
 - Recycle sewage, after appropriate treatment, for agriculture.
 - Preventive health care and awareness on sanitary practices; recruit female staff.
 - Enabling environment for and incentives for private sector participation.
 - Improved human resources and their management, counter absenteeism and negligence.
 - Pricing and policing of drinking water.
 - Increasing number of plans and projects with community participation (during planning capital works and O&M).
 - Assessing current and projected needs.
- Raise awareness on efficient consumption of drinking water and on the consequences of drinking water without treatment; promote cost effective methods for treating water prior to drinking in Pishin.
- Establish a district Code of Conduct on Water Use.
- Provide a range of services with different price tags: household connection; communal;

communal filtered etc.

- Take action on unaccounted for water, non revenue water in Pishin.
- Ensure all schemes are demand driven and not supply driven (in particular provincial and federal schemes tend to be supply driven and little care is taken to determine unit cost of O&M for these services; this more often than not leads to sunk investment) in Pishin.
- Incentives for improved sanitation in Pishin:
 - Incentives and awards for open-defecation free villages and union councils as set out in the federal sanitation policy.
 - Financial support for building septic tanks and improved latrines in low-income areas.
- Lobby with the GoB for the following in Pishin:
 - Coordination on a water and sanitation MIS.
 - Refresher and training courses for staff and private sector contractors/plumbers etc.
 - Private sector enhancement through incentives and training e.g. septic tank management SMEs etc.
 - Performance based salaries.
 - Community managed monitoring linked to financial incentives.
 - Preference to O&M over capital expenditure.
 - Strong monitoring and evaluation systems.
- Provide support for making latrines in houses on a self-help basis; safe disposal of waste water, solid waste and hospital waste; and importance of washing hands and personal hygiene in Pishin.
- Prepare a strategic solid waste management plan; construct and manage a landfill² in Pishin.
- Encouragement and support for collection and segregation of solid waste by households and disposal of waste to a collection point, from where the Pishin Town Committee can transport and dispose it in proper landfills.
- Improving the supply chain for recycled goods - market for recyclable/ reusable materials, composting of biodegradable waste, recycling of usable waste (metallic articles, glass, wood, paper etc.), and recycling of waste water in Pishin.
- Pilot projects in collaboration with NGOs/CSOs and private sector in particular to make a concerted effort for raising awareness on public health in Pishin.
- Improving governance, accountability and participation in Pishin:
 - Disseminating information regarding funds and their application including water quality, air and water pollution, and public health.
 - Regulation of private sector service providers (a) fees (b) quality of water (c) facilities (d) open dumping (e) environmental degradation (f) public health concerns.
 - Establish platforms for engaging with civil society and private sector organisations.

4. Natural resource management

4.1 Land use

Pishin District Government recognises that natural resource management in Pishin needs to be studied in the context of the district becoming water-scarce; characterised by poverty; and with limited access to basic facilities. This is in a context of: extreme aridity and periodic drought and a shift from arid farming and livestock grazing to irrigated agriculture and orchards; overgrazed range-lands and low productivity livestock; decline in wildlife populations; and lack of forest management (notified state forests, and forest vegetation).



The total geographical area of the district is 8,812 km² (881,200 hectares) or 787,400 hectares. The reported area is 293,868 hectares (about 37.32 per cent) and 493,532 hectares is the non-reported area (about 62.68 per cent of the total geographical area). According to the Agricultural Statistics of Balochistan (2008-09), the area, which is not available for cultivation, is 82,150 hectares (27.95 per cent of the reported area).

The total uncultivated area is 141,434 hectares (48.12 per cent). The total cultivated area in the year 2008-09 was 152,434 hectares (51.87 per cent), of the reported area out of which 31,667 hectares (10.77 per cent) was net sown. The area under forests is 26,438 hectares.

More than one third of the area i.e. 37.32 per cent is not even reported (non-surveyed).

Land use change needs to be guided by the government keeping several factors in mind, some of these include: environmental safeguards, over exploitation, enforcement of law, inappropriate institutional arrangements; low institutional capacity; role of planning and management; and lack of awareness on its impact on natural resources, income and livelihoods.

Pishin District Government is fully aware of the need to apply land use management as a tool for developing its agriculture and horticulture sectors, and capturing the advantages brought by proximity to Quetta City and the RCD Highway. Pishin District Government will work with the Survey of Pakistan, the Pakistan Space and Upper Atmosphere Research Commission, Board of Revenue and private sector organisations, such as World Wildlife Fund (WWF) and IUCN, to see if satellite image related modalities may

be used to validate land uses. Steps will be taken to procure archival maps of the district.

4.2 Integrated water resource management

The complexity of water resource management poses many challenges. Fresh water is the most precious commodity for people living in arid areas like Pishin. Water managers need to solve a range of interrelated problems involving a wide range of stakeholders, navigating conflicting priorities and varying contexts. The environmental, social and political aspects of water management span a wide array of issues and areas. These include: water policies; water rights; water uses; water infrastructure development; river basin management; watersheds; wetlands; water storage; water allocation; water distribution and sharing arrangements; drought preparedness; and water-related disputes and their resolution. The management of water in the context of climate change is one of the most pressing global challenges of our times.

Water resource management has to take into account the following competing demands on water:

1. Drinking and domestic needs;



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IUCN's IWRM project at Qila Iskan Khan

2. Food production (agriculture, livestock etc.);
3. Economic infrastructure development and use (energy, transport, tourism etc.);
4. Conservation for periods of drought;
5. Conservation for future generations; and
6. Natural habitats.

Social participation in water management and governance is traditionally found in tribal societies such as Pishin. Traditional water management systems, e.g. *karezes*, have not been able to transform into modern water management systems so traditional and indigenous wisdom has been lost.

Of the 14 basins in the province, the Pishin Loralai Basin is the most stressed due to non-sustainable groundwater exploitation. The Basin includes Quetta, Pishin, Qila Abdullah, Mustung and Kalat districts. Pishin District Government is committed to working with the district governments of Quetta, Mustung, Qila Abdullah, and Kalat on a joint Pishin Lora Basin Recharge Effort and assess potential for lifting water from the Pishin Loralai river, its tributaries and other permanent streams.

Pishin District Government recognises that ground water is highly valuable and has to be used judiciously. This can only be ensured through having a realistic and coherent policy, regulating water extraction, and introducing water conservation.

The most critical management challenge in arid areas is how to deal with short periods of excess water and flooding on the one hand, and long periods of little or no water.

The principal stream is the Pishin Lora, flowing from Barshore in the northeast into the Shorarud valley near Burj Aziz Khan. Its principal effluents in Pishin are the Muchka from the northwest, the Shorarud and the Kakar Lora. The Pishin Lora flows up to Bund Khushdil Khan and some of the water finds its way towards the north. From there it flows into Afghanistan. Another stream the Surkhab Lora, flows from Sher Ghundi and it joins the Pishin Lora near Shadzai. A third stream is the Kakar Lora, which is composed of many small rivers and streams coming from the Takatu hills. The Kakar Lora irrigates Manzaki

and three villages in Haiderzai.

Most parts of Pishin district drain into Pishin Loralai at different locations. The basin is a transboundary watercourse as it leaves Pishin district to enter Afghanistan and again enters Pakistan in Noshki district, to end up at the Zangi Nawar lake. The water quality downstream from Bund Khushdil Khan is not good and the water is not potable. Back in the 1990s, the potential of developing a dam at Burj Aziz on the Pishin Lora for the supply of drinking water to Quetta city was studied. It was not found feasible because of the high concentration of salts.

Karezat tehsil, as the name indicates, had a vast system of *karezat*, which supported orchards and other crops. In order to enhance water supply for irrigation and expand cultivation, this system was subsequently replaced (almost entirely) with tube wells, which caused the *karezes* to dry up as well as depleting the ground water.

Construction of delay action dams or recharge dams at appropriate locations is needed in order to provide an inbuilt mechanism to recharge the Balozai Dam. Construction of 80 dams is required in the medium term. Soil studies are important for deciding the location of a dam and determining the command area.

4.3 Forests

The total forest area of Pishin district, as per notifications of GoB, is 73,775 hectares. This includes rangelands like Maslakh (28,243 hectares) as well as a part of the Surghund Forest. There is an additional artificial forest reserve, situated at Bund Khush Dil Khan, over 475 hectares.

Forests are vital for environmental services and for maintaining the ecological balance of an area. They play an important role in the supply of wood and non-wood products including water, grazing, Medicinal and Aromatic Plants (MAP); maintaining watersheds; wildlife habitats and dependent species of wild animals and plants; control of erosion and conservation of soils; sequestration of carbon; and provision of countryside recreation and ecotourism.

The Forest and Wildlife Department manages the forests and plantations, and is also

responsible for rangeland management. There are two types of forests found in Pishin district; natural forests and artificial forests (comprising range land, plantation, conifers and other types of trees). The Executive District Officer Forest is the district head of the department and is assisted by Range Forest Officers, Foresters and Forest Guards. Temporary labour is employed for forestry operations in the district.

The Surkhab natural forest reserve has been cut and used as fuel largely by refugees. During the early 1980s, Surkhab was one of the largest refugee camps, more than 156,000 refugees were registered there.

4.4 Plants

Pishin district is endowed with a large variety of vegetation. Main tree species on higher ridges in the district are *Juniperus excelsa*, *Pistacia mtica*, *Pistacia khinjuk* and *Fraxinus xanthoxyloides*; interspersed bushes include *Taramix gallica*, *Haloxlon griffithii*, *Sophora mollis*, *Sophora alopecuroides*, *Artemisia maritima*, *suma* (*Ephedra intermedia*), *Ephedra major*, *Prunus eburnea*, *Stocksia brahuica*, *shin shob* (*Mentha sylvestris*), *shezgi* (*Eremurus aucherianus*), *zawal* (*Achillea sunlolina*), *khakshir* (*Susymbrium sophia*), *Alhagi camelorum*, *Carum bulbocastaneum*, *Arnebia cornuata*, *Scirpus wardianus*, *Plantago major* and *makhi* (*Caragana ambigua*); naturally occurring bulbous plants are tulipa, ferula, iris and allium while common grasses are *Eleusine flagellifera*, *Cymbopogon parkeri*, *Saccharum ciliare* and *Andropogon annuatus*. The original stepic tree cover of mountain scrub forests still exists in some protected areas. Vegetation in the Maslakh Range Management Area has been thoroughly studied; 83 species have been reported from the area.

In the winter, roots of *Artemisia* (*tarkha sperah*) and *Haloxgon griffithic* (*shorai*) are used as fuel in the villages and their twiggy branches are used as feed for small ruminants. *Taramix gallica* is also used for fuel and for roof structures. *Carum bulbocastaneum* (*zira siyah*) is used as a spice and fetches a high value in the market. Further, *Ephedra* (*suma*) and

Susymbrium (*khakshir*) are found in large quantity and have medicinal value. A major proportion of the above mentioned vegetation e.g. *Ephedra* is marketed. Villagers also use many plants which have medicinal properties. Timbre wood is not available in the forests of the district. The only types of wood available for firewood are juniper in Surghund, *Pistacia khinjuk* in Gawal and *Tamarix* in Surkhab.

4.5 Wildlife and protected areas

The Maslakh rangeland and some areas in Barshore *Tehsil* also offer opportunities for community based conservation and sustainable use of wildlife, wetlands and fisheries.²⁶

Most game species indigenous to Pishin district, such as the ibex (*Capra aegagrus*) markhor (*Capra jerdoni*) and chinkara (*Gazella bennettii*) have been wiped out.

The local mammals include the Marbeled pole cat (*Vormela peregusna*), Cape hare (*Lepus capensis*), Small Five-toed jerboa (*Allactaga elater*), Migratory hamster or Grey hamster (*Cricetulus migratorius*), and Blanford's jerboa (*Jaculus blanfordi*).

Important game birds in the area include: Chakor (*Alectoris chukar*), See-see partridge (*Ammoperdix griseogularis*), migratory Houbara bustard (*Chlamydotis undulata*), Sandgrouse (*Pterocles spp.*), and starlings (*Paster spp.*).

Wintering ducks at Bund Khushdil Khan -an important staging area for migrating ducks and shorebirds include: *Anas poecilorhyncha*, *Tadorna tadorna*, *Marmaronetta angustirostris*, *Anas strepera*, *A. crecca*, *A. platyrhynchos*, *Aythya ferina*, along with *Fulica atra*, *Porphyrio porphyrio*, *Ciconia nigra*, *Grus grus* and *Gallinago gallinago*, *A. poecilorhyncha*, *Tadorna tadorna*, and *Marmaronetta angustirostris*.

In karez channels *Euphlyctis cyanophlyctis microspinulata*, *Paa stenosignata* are resident species, while *Bufo stomaticus*, *B. viridis*

²⁶ There is no Fisheries Department. Some small fish are found in river/ streams. Bund Khushdil Khan and Pishin Lora are the only significant wetlands, especially for migratory waterfowl. Commercial fishing is non-existent in the district. The fish fauna of *karez*es has not been studied comprehensively and is threatened due to the drying up of *karez*es, especially in areas with tube wells. The catchment of the Pishin Lora and other streams have been over-exploited and not well managed. As a result, most of the precipitation drains out as runoff and many stretches of the river/streams remain dry in certain periods of the year negatively impacting the fish fauna.



Commonly found See-see Partridge in Pishin

zugmayri and *Ophisops jerdonii* are found among marginal vegetation. *Agrionemys horsfieldii* is found in the crevices and holes cut by rainwater in mud flats along *karez* channels and natural fountains. In the same location common ground geckos *Cyrtopodion scaber* and *C. watsoni* may be collected from crevices in the scrubland. The lacertids *Eremias guttulata* and *Eumeces schneideri* makes their holes in flat dry fields with low vegetation. *Acanthodactylus micropholis*, *A. canotoris* and *Eremias velox* frequent sandy soil with bushy vegetation. Local *agamide* *Laudakia caucascia*, *L. nupta*, *L. ruderata* frequent surrounding mountains. The toad head *agamid* of genus *Phrynocephalus* are confined to sand dunes.

Herpeto-fauna in *Takatu*, *Toba Kakar* and similar habitats: the Persian gecko *Hemidactylus persicus* is a common edifice lizard, and the *Eu.bleph.aris maculanous* lives in gravel and stony sides of the mud flats. Scrubland geckos include *H. scaber* and *H. watsoni*. The *Laudakia caucasica*, *L. nupta* are found on cliffs *Agrionemys horsfieldii*, ground *agamids* *T. ruderata* and *Uromastix asmuksi* frequent mud flats and scrub land, while *Varanus griscus* abounds. *Calotes versicolor* and *Boiga melanocephala* are arboreal shrub dwellers. *Acanthodactylus blanfordi*, *Eremias velox* are common sand lizards. *Pseudocerastes persicus* and *Vipera labetina*

are collected from bushy slopes of mountains. While in the wetlands, common amphibians recorded are *Bufo stomaticus*, *B. v. zugmayri*, *Euphyctis c. microspinulata* and *Paa sternosingata*, *Ramphotyphlops braminus* and *Leptotyphlops blanfordii*.

Statistics are not available to indicate the populations of wild animal species found in the district. Independent expert surveys show that the populations have declined for several reasons. First, there is no clear-cut government policy on wildlife protection. Second, the presence of refugees in the area has increased tree felling. Third, illegal hunting has caused a decline in the populations of all game animals and birds. Fourth, the rapid population growth in the district has had an adverse effect on wildlife.

Two protected areas in Pishin district are:

1. Maslakh Game Sanctuary, over 46,559 hectares. It was established in 1968. Chinkara and urial/gad were found here but have been eliminated. Bird species are the main attraction now.
2. Bund Khushdil Khan Game Reserve, over 1,296 hectares was established in 1983. This is a shallow water storage dam, a water bird habitat and a recreational area. The reservoir was built in the period 1886-



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Livestock, a key source of livelihood

1891. The reservoir was five kilometer long and two kilometer wide with a maximum depth of 100 meters and irrigated an area of 1,469 hectares. Currently, it has silted up and its catchment area has been encroached. Due to the drought of 1995-2004, the reservoir dried up; due to rains in subsequent years it has started rejuvenating. Heavy dredging is required before it can regain its past glory.

4.6 Rangelands

Range-based livestock production systems are one of the major sources of livelihood for people living in rural areas. Small ruminants, such as sheep and goats, are better adapted to the harsh environment and greatly outnumber large ruminants. It is estimated that the number of sheep and goats is many times that of the carrying capacity of the rangelands. Poor nutrition available to

livestock results in high mortality, high parasite loads and stunted growth. As a result livestock owners sustain high losses, especially during droughts.

Most of the livestock depends on the rangelands in the district. As livestock are critical assets for the poor, poverty reduction strategies must include rangeland management.

One of the major institutional issues with rangelands is that they are under the administrative control of the Forest and Wildlife Department but are used primarily for livestock grazing.

Coordination between the two departments is practically non-existent. As a result, the full potential of livestock and rangeland resources is not being realised and rangelands are depleting at a fast rate. The Pishin District Government will ensure coordination between the departments at the district level.

Box 6: Pishin natural resource plan – integrated water

Objective: Manage existing waters efficiently and conserve water resources for future generations in Pishin.

The scope of the district Integrated Water Management Plan for Pishin will be:

- District Water Management Committee (scope to include all aspects of water).
- Directory and map of stakeholders.
- Pishin district map showing ‘Water Sources’ and district Land Capitalisation Plan’ including:
 - Delineation of detailed micro basins in the district and evaluation of their potential for developing surface water storage.
 - Estimating ground water sources (by using latest radar imageries), and comparison with benchmarks, where available for future planning.
 - Analysis of ground water depletion, year wise, based on tube well use.
 - Resistivity survey of potential groundwater area for estimating the aquifer.
 - Detailed delineation of sub-watersheds in the district and evaluation of their potential for forestry, agriculture, watershed management, range management and water development (developing surface water storage, hill torrent control, spate irrigation and rainwater harvesting).
- Target indicators and baselines for Pishin.
- Assessment of current needs and linkages with other sectors; instruments and incentives for better coordination in Pishin.
- Assessment of the impact of climate change in Pishin.
- Coordination with other districts for the Pishin Loralai Basin Recharge Effort; targets for groundwater recharge prioritised by active recharge zones.
- Flood water management in Pishin.
- Rain water harvesting for direct consumption; increasing water storage capacity; check dams and other infrastructure in Pishin.
- Extensive coordination with the following sectors in Pishin: forestry, protected areas, rangelands, drinking water and sanitation, health, and disaster management.
- Raise awareness on the environmental and ecological functions of water sheds and their impact on Pishin.
- Promotion of water efficient technologies for Pishin: land levelling, different types of irrigation systems precision irrigation, drip irrigation (introduced in Quetta), sprinkler irrigation and the spate irrigation.
- Demanding policy reforms at the federal and provincial levels and endorsement of a District Tube Well Policy for Pishin. Application of the federal water resource management policy. The water table is depleting at a rate of ten feet per year due to the installation of a large number of tube wells. The water level has dropped to about 1,000 feet in certain areas.
 - Need to price water extracted by tube wells.
 - Need to remove subsidy on electricity for tube wells.
- Extension work and dissemination of research on low delta crops and fruit orchards and on optimising the soil-plant-water combination for sustainable use of water in Pishin.

- Ensure the sewage is treated before recycled for vegetable cultivation and orchard irrigation or before draining into streams; and solid waste does not block and pollute water courses and reserves in Pishin.
- Motivating communities to construct local check dams for conserving water and planting trees in Pishin.
- Watershed management operations in forests and rangelands in Pishin.
- Pilot projects in collaboration with NGOs/CSOs and private sector.

Box 7: Pishin natural resource plan – forests and protected areas

Objective: Manage existing forests efficiently and conserve forest resources for future generations, ensure conservation of forest biodiversity and maintenance of ecosystem functions including regulation of waters, combating natural disasters, mitigation of climate change, improvement of habitats in protected areas, promotion of ecotourism, and greening the urban environments in Pishin.

The Pishin Forest and Protected Areas Plan will include:

- Map using satellite images showing forest areas, forest cover, vegetation in the forests, property rights, land capitalisation, and flora and fauna in the district (although livestock grazing is the main land capitalisation in the district, the exact area and location of rangelands is not available, no details are available for the cultivable waste area and the actual area of forest cover).
- Establish principles and working policies for Pishin.
- Raise productivity of forests in Pishin; discourage alien invasive species; restore ecology of degraded forests in Pishin by planting maximum species.
- Capacity to manage forests, techniques for regeneration, management of diseases, and community based management and regulation, will be created in Pishin.
- Promote alternative energies for fuel consumption for Pishin. Pilot alternative energy sources in Pishin: biogas, solar PV, wind and solar thermal. Compile data on wind feasibility.
- Promote affordable alternatives to fuel wood and the extension of gas infrastructure in Pishin; reduce wood wastage in Pishin.
- Development of stocking of soil and water compatible plants in Pishin.
- Raise forest plantations on communal lands in Pishin, along the stream and river banks around the storage and recharge dams, on the borders of fields with multi purpose trees.
- Raise plantations and encourage and support agro-forestry for multiple purpose trees for fodder, firewood, timber, soil conservation, watershed, biodiversity, and carbon sequestration in Pishin; raise herbs, resins and gums in Pishin.
- Establish state-owned biodiversity rich areas as protected areas, with the participation of local communities, for promoting ecotourism and sustainable use in Pishin.
- Set up scientifically managed protected areas (forest and wildlife areas) for ecotourism and sustainable application in Pishin.
- Expand efforts beyond tree and game species to the general flora and fauna in Pishin.
- Establish target indicators and baselines for Pishin.
- Raise awareness on current situation and the future (including climate change, population growth) using specific data on Pishin; assessing current and future needs for Pishin.

- Promote community participation in management and regulation of forests, rangelands and protected areas in Pishin.
- Lobby with the GoB for Pishin:
 - Implementing the Biodiversity Action Plan for Pakistan (2000) and the National Forest Diversity Vision (2006) as applicable in Pishin.
 - Preparing a province specific action plan for biodiversity, wildlife and protected areas with specific plans, policies and targets for Pishin.
- Pilot projects in collaboration with NGOs/CSOs and private sector e.g.dwarf palm related handicrafts, MAPs etc in Pishin.

Box 8: Pishin natural resource plan – wildlife

Objective: Secure species and promote sustainable conservation.

The Pishin Wildlife Plan will include:

- Map of existing animals in the district including annual count of migratory birds.
- Directory of stakeholders and retailers.
- Photographs, map and list of endangered species.
- Baseline data.
- Target indicators.
- List of individuals involved in trade of animals (legal and illegal).
- Lobby with GoB on:
 - Preparing a provincial action plan for wildlife, rangelands biodiversity, wildlife and protected areas, and livestock with Pishin specific plans, programmes and interventions.
- Promote:
 - Hunters' associations and lobby with them to ensure sustainable practices.
 - Community participation, through social mobilisation, organisation, awareness raising, capacity building and economic incentives. Community based trophy hunting, has succeeded in other parts of Balochistan (Torghar), Khyber Pakhtunkhwa, and Gilgit-Baltistan. Dureji is another success model. These can be replicated.
 - Design and implement projects for ecotourism.
- Community regulation and enforcement of laws and policies in Pishin.
- Implement pilot projects in collaboration with NGOs/CSOs and private sector in Pishin.

Box 9: Pishin natural resource plan – rangelands

Objectives: Ensure that rangelands in Pishin are restored and are used sustainably.

- The Pishin Rangeland Plan will include:
 - Map of district with land use and zoning area.
 - Forest cover (actual area).
 - Rangeland (actual area).
 - Forest areas (actual area).
 - Ownership (private, communal, disputed) of land.
 - Land settlement and records.
 - Livestock.
 - Wood and vegetation use for energy.
 - Access to rangelands by income.
- Map of rangelands in Pishin by types and vulnerability.
- Map of Rangelands in Pishin by grazing potential and short term rejuvenation:
 - Ecological zoning of rangelands.
 - Water points and salt licks.
- Lobby with the GoB on: preparing a province specific action plan with detailed district plans for rangelands, biodiversity, wildlife and protected areas and livestock with specific plans, programmes and targets for Pishin.
- Establish productive rangeland identification and monitoring in Pishin through satellite imagery.
- Establish baseline indicators and targets for Pishin such as:
 - Ratio between livestock: rangeland.
 - Animals and livestock-forage ratio (to work towards alternative feeds such as molasses).
- Plan and implement grazing management in Pishin; discourage and reduce gradually the open free grazing of livestock.
- Invest in reseeding, seeding, development of water points, and placement of salt licks for improving the rangelands in Pishin; this will also help in enhancing recharge of water, conservation of biodiversity, especially plant species.
- Implement interventions and programmes on community participation/planning, management and regulation for rangelands in Pishin.
- Coordinate between the Forest Department (responsible for rangelands) and the Livestock Department for/in Pishin; launch programmes in Pishin for improved breeds, feed (including rangeland management) and health of livestock.
- Engage with nomads to see how nomadic paths and rangeland management can be complementary in Pishin.
- Raise pastoralist awareness on rangeland management in Pishin.
- Coordinate with NGOs, CSOs and the private sector to pilot new initiatives.

5. Agriculture and livestock

There is need to rehabilitate the Bund Khushdil Khan Reservoir to irrigate its command area of 1,469 hectares.

In 2008-09 there were 1048 tractors in Pishin (10 in the government sector and 1,038 were privately owned); out of 162 threshers four were in the government sector and 158 were privately owned; out of 21 bulldozers 12 were in the government sector and nine were privately owned. There was no harvester or reaper in the district.²⁷ Some positive aspects and contributions of Afghan refugees include the introduction of good practices in agriculture (e.g. use of fertilisers, raising seedling of crops and fruit nurseries, keeping milk cows, and providing information about wildlife to local communities etc).

The locus-trine soils of Pishin district are poorly drained and if heavily and continuously irrigated, serious agronomic problems will arise, especially for orchards. Poor management of land resources, resulting in loss of fertile top soils, and absence of callibrating the



²⁷ Government of Balochistan (2006 and 2008-09), Agricultural Statistics of Balochistan 2006, 2008-2009. Quetta, Balochistan: Government of Balochistan.

water-crop-soil requirement has led to a reduction in agricultural productivity.

5.1 Livestock

Livestock is an important source of livelihood for a majority of the rural population. It not only generates income for the owners (sale of animals, wool and hides), but is also a major source of nutrition (milk, yogurt, *lassi*, *kurt*, meat). In addition, some livestock is important for transportation particularly in those areas where road based transport is not available or where the area is hilly or the terrain rugged.

Most of the people in the district are engaged in livestock grazing activities. Traditionally, nomads, along with their herds, regularly visit Pishin district when the weather is not favourable in Afghanistan.

Over the past three decades the importance of livestock and rangelands has decreased due to the extension of tube well supported agriculture. However, reversal is foreseen, as tube well agriculture is not likely to be viable for much longer.

The Livestock Department, supported by development partners FAO and United Nations Development Programme (UNDP), is involved in: animal husbandry; disease prevention and treatment (veterinary

hospitals and dispensaries); artificial insemination; input supplies; and dairy development. The extension services of the department focus on awareness raising among farmers regarding livestock management. Marketing services and price setting are influenced by the private sector and public sectors.

22,865 households reported on the number of cattle. The number of animals reported were 91,433; the number of male cattle three years and above were 7,018, of which 3,858 were used for breeding, number of male cattle below three years were 17,914. The number of female cattle were 53,654 - 47,427 were in milk, 3,577 were dry and 2,650 had not yet calved; and the number of female cattle below three years were 12,848.

Out of 22,258 households 7,196 (32.33 per cent of the total) got their cows and buffaloes artificially inseminated; 3,228 (14.5 per cent) households did not like artificial insemination, whereas 2,103 (9.45 per cent) households reported that the Artificial Insemination Centre was located at a distance that was beyond their reach.

The addition of two veterinary hospitals in the year 2004-05 increased their number to seven. Twenty veterinary dispensaries in the year 2004-05 increased to 27 by 2005-06. During 2007, 194,457 animals were treated, 277,984 vaccinated and 790 castrated.²⁸



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Cattle in Pishin district



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Farmer packing apples to ship to the market

The most prevalent diseases among the livestock in Pishin district were foot and mouth disease, round worms, ticks, and tetanus.

5.2 Poultry

Poultry is an important asset for women, as they are allowed to retain the meagre income they make from the sale of poultry and/or eggs, and poultry provides a source of nutrition for the entire family. There is one government poultry farm containing nearly 500 layers. There are a number of privately owned poultry farms in the district (Surkhab has 15, Bostan two and in Pishin Bazaar one).²⁹

The dominant flock sizes of poultry birds in the district are 1-10, 11-25, 26-50 and 51-75; a small number of ducks and ducklings are also kept by some households. According to the Livestock Census (2006), total poultry birds were 529,493 including 97,910 cocks, 280,471 hens, 151,112 chicken and 2,258 ducks, drakes and ducklings in Pishin district.³⁰

5.3 Fruits and Vegetables

The district produces significant quantities of fruits and vegetables, which are marketed in

the province and outside. There are numerous intermediaries in the marketing process. The dissemination of accurate and timely marketing information is vital in helping farmers make good marketing decisions. It helps in the short term to decide when and where to market the produce, what price to expect, and in the long term, what to produce. In Quetta and Dera Murad Jamali districts, there is a well-developed system of wholesale markets.

Pishin district, produces significant quantities of fruits and vegetables, which are marketed in the province and outside. There are numerous intermediaries in the marketing process, thereby reducing the income for farmers.

The farmers of Pishin district contend that the supply of fertilisers and electricity for farmers in neighbouring Iran is free, which decreases the production cost of fruits for Iranian farmers and gives them a competitive advantage in the international market. Instead, there are long periods of load shedding and fluctuation in Pishin District. This situation may be dealt with through the introduction of low delta fruit varieties and high efficiency irrigation techniques.

²⁹ ibid.

³⁰ ibid.

Box 10: Pishin agriculture plan

Objective: Ensure sustainable growth, food security and income generation opportunities in Pishin.

The Pishin Agriculture Plan will include:

- Map and directory of stakeholders service providers and retailers.
- Land settlement and land records; land consolidation; ownership rights; cultivable area.
- Map and list of all crops grown.
- Map soil quality (vulnerability to wind erosion, adoption of agro chemicals, and cultivation practices).
- Directory of stakeholders, service providers (agricultural machinery mechanics etc).
- Map and list of potential crops and an assessment of water consumption, energy consumption, income, yield and sustainability in Pishin
 - Analysis of soil-crop-water requirement, compatibility and efficiency.
 - Adoption of practices to prevent soil erosion and desertification.
 - Construction of mini dams and development of command area for the dams.
 - Adoption of integrated pest management and cultural practices for the control of pests.
 - Fruit and vegetable documentation and expansion, greenhouse (tunnel), off season vegetable production and organic farming.
- Links with:
 - Directorate of Agriculture Services for Crop², which has set up an online information system, that collects marketing information from a variety of sources in both the public and private sectors.
 - Directorate of Agriculture Extension; which provides subsidised seeds³ and through its extension field staff introduces the application of new technology (optimum use of water, fertiliser, seeds, maintaining top soil etc.) to farmers.
 - Directorate of Agriculture, Economics and Marketing Balochistan Quetta is now planning to develop a provincial database so that relevant agencies can operate more efficiently.
 - AGMARKET in Balochistan has decentralised the marketing information system to improve access to information at the district level.
- Promote in Pishin:
 - Low delta crops and orchards such as pistachios, grapes, olives and almonds.
 - Cultivation of MAP.
 - The cultivation of tomatoes, onions, maize, potatoes, melons and chilies.
- Lobby with GoB on measures that can be given immediate affect e.g. availability of bull dozers.
- In Pishin restrict and regulate:
 - High delta crops such as spinach and radishes.
 - Design a community managed zoning plan for crops based on water and soil optimisation.
- Facilitate access to inputs; manure and compost; seed and fertiliser availability; quality of seeds; and marketing of certified seeds in Pishin.
- Compile list of possible sectors in Pishin where value added for fruits and vegetables can be tapped; identify potential agro-based small and medium enterprises; and introduce Global Good Agricultural Practices (GGAP) and International Feature Standard (IFS) certification for

processing plants, pack houses and transport of agricultural produce to make it more export-worthy.

- Adopt practices to reduce post-harvest losses and reduce waste of low grade fruit in Pishin.
- Improve storage and transport of agricultural produce, fruits, vegetables, and flowers in Pishin.
- Design a strategy to reform the Market Act and adopt modern marketing practices for agricultural produce which are more inclusive, transparent and fair in Pishin.
- Design an effective business model for Pishin for linking agricultural produce to markets.
- Enable access to agriculture machinery in Pishin and create small and medium enterprises around its maintenance.
- Pilot cooperative farming in Pishin.
- Facilitate accreditation of labs used in the agricultural sector in Pishin.
- Restructure current labs to make them more self-sustaining in Pishin.
- Enter into partnerships in Pishin with the private sector, NGOs/CSOs for providing extension services.
- Pilot with NGOs, CSOs and the private sector in Pishin on water efficient irrigation (e.g. land levelling, drip and sprinkler irrigation organic produce, and GGAP and IFS certified products for export).

Box 11: Floriculture in Pishin

Floriculture includes the growing of and use of flowers, raising ornamental plant nurseries, ornamental gardening and landscaping.

It is a comparatively new agricultural activity in Balochistan. Various flowering plants have been introduced at various places in the province (seeds, bulbs, corms, rhizomes, tubers etc.) The private sector has come forward in this business.

The Agriculture Department grows flowers for demonstration and sale at Quetta and it plans to establish flower shops at divisional headquarters for sale of cut flowers. The flower shop at Quetta is almost ready and the ones at Kuchlak and Kalat are underway. Floriculture requires exacting inputs, investment, skills, intensive work, which in turn needs taking of risks. More importantly, it requires communication and storage infrastructure.

Floriculture can improve the socio-economic conditions of the farmers if they include growing of cut flowers, and raising nurseries of forest, fruit and ornamental plants on farmlands. Floriculture is not a traditional practice in Pishin, only a small number of farmers in the district know the techniques of growing, harvesting and marketing, flowers as well as its economics. The expertise in floriculture in the department, especially its extension staff is limited, and so is the scope, which is confined to cut flowers:

- Develop and implement a Floriculture Promotion Strategy for Pishin.
- Prepare feasibilities for small and medium enterprises and small farmers in Pishin. Raise awareness, provide business related information, and build capacity of nursery growers, professionals and amateurs.
- Prepare a map of Pishin district with known floriculture species; make recommendations on appropriate climatic and water conditions.
- Prepare a list of experts in Pishin, province and rest of the country.
- Prepare a list of commercial enterprises across the country.

- Flowers are a perishable commodity and require rapid access and certain markets. Gradually create adequate transportation and storage in Pishin.
- Arrange exposure visits for interested farmers from Pishin to see ornamental nurseries and cut flower fields at the Quetta Agricultural Farm and Pattoki.
- Promote the use of cut flowers, garland flowers and flower petals in Pishin.
- Facilitate procurement, multiplication and marketing of flower seeds, bulbs, and ornamental plants-herbs, shrubs and trees in Pishin.
- Provide technical advice and service regularly to growers in Pishin.
- Arrange flower shows and flower arrangement shows in Pishin.
- Facilitate farmers' access to credit in Pishin from the development financial institutions.
- The Pishin District Government is committed to:
 - Piloting practices such as growing flowers in plastic tunnels.
 - Raising nurseries of ornamental plants on farmlands.
 - Providing the necessary equipment, such as lathe houses.
 - Linking the produce to demand from the markets.
- Pilot with NGOs, CBOs and the private sector in Pishin.

Box 12: Pishin livestock and poultry plan

Objective: Ensure that the full potential of the livestock and poultry sector is realised in Pishin without compromising its sustainability or that of agriculture and natural resources.

The Pishin Livestock and Poultry Plan will include:

- Map and director of service providers and facilities in Pishin.
- Map of livestock by grazing area in Pishin.
- Establishment of baseline indicators and targets in Pishin:
 - Nutrition of livestock/poultry.
 - Diseases in livestock/poultry.
 - Age of livestock/poultry.
 - Milk production.
 - Size of herds/flocks.
 - Size of herds/flocks by households.
 - Ratio of unproductive: productive livestock/poultry.
 - Price of hide: price of value added hide.
 - Livestock: forage.
 - Livestock/poultry: veterinary Hospital.
 - Livestock/poultry: vets.
 - Livestock/poultry: extension workers.
 - Household: extension workers.
 - Native: endemic livestock breeds.

- Native: endemic fodder and feed types.
- Prepare a management plan for Pishin focusing on feed, breed and health.
- Close coordination between the Livestock, Forest and Wildlife and Agriculture Departments for improvement of livestock and rangelands in Pishin; joint livestock and rangeland projects, interventions and activities for implementation by joint teams.
- Disease prevention and control plan for Pishin (hygiene at poultry farms and livestock farms, poultry management kits, training on diseases, training on hygienic slaughter practices, markets for medicines, vaccination).
- Coordinate with the Livelihood Diversification Plan for Pishin, and the Forests and Rangelands Plan for Pishin.
- Introduction of optimal breeds for Pishin district's arid climate.
- Hold discussions with nomads and pastoralists to understand their priorities and needs including:
 - Large-scale movement of nomads and semi nomadic communities and their livestock, which deplete the rangelands and transmit diseases to local livestock. There is no quarantine system applied to the migrant herds from outside or to local herds when returning after grazing from the *kachhi* plains.
 - Difficulties in nomadic grazing due to uncertainty of forage and absence of facilities, both for the grazers and animals on and along the migratory routes, as well as dependence of grazers and animals on the co-operation of local communities.
- Vaccination and quarantine camps should be setup in Pishin on the migratory routes of animals especially during the march-april migration through the district.
- Raise awareness of GoB plans and programmes as impacting Pishin.
- Coordination with the NGOs/CSOs and private sector on piloting new initiatives in Pishin:
 - Find solutions for the present situation of imperfect livestock marketing.
 - Design projects and interventions for the production and marketing of silage, which has tremendous advantage as feed for animals in arid and drought-prone areas.
 - Introduce and manage high protein molasses blocks for winter feeding and drought periods.
 - Improve animal health care facilities (vaccination against infectious and communicable diseases, precautions against worms, ticks, and curative treatment including de-worming are important for the health of livestock).
 - Depute veterinary assistants on the established migratory routes for vaccination and treatment, especially the treatment of infectious and communicable diseases. Find solutions for issues such as slaughtering in the open (weak monitoring, surveillance and monitoring of meat being sold, resulting in low quality or un-healthy meat being supplied to the market). There is no meat processing plant in the province.
 - Local livestock markets exist in different parts of the district. Livestock prices increase rapidly and sometimes fluctuate due to the arrival of nomads from Afghanistan with their livestock, droughts when the owners cannot afford to feed the animals, slaughtering of a large number of animals on *Eid-ul-Azha*. However, consumers do not benefit from temporary reduction in prices)
- Improve livestock marketing and reduce dependence on external markets in Pishin.

- Improve supply, management, access and knowledge of feed and fodder in Pishin:
 - Increase high yielding grass varieties and information on grazing areas.
 - Educate and train farmers in Pishin through livestock extension services and training programmes.
 - Organise livestock shows in Pishin like the Sibi *mela*.
 - Increase fodder and feed production.
 - Conduct research on fodder species of trees and shrubs, their planting, yield and their nutrition etc.
 - Construct seasonal facilities for the grazers and livestock on the migratory routes in remotely located range areas.
- Improve monitoring of veterinary staff and other services regarding cure and prevention in Pishin:
 - Improve animal health care facilities.
 - Control infectious livestock diseases being introduced by the livestock of Afghan Powindas from across the Pak-Afghan border.
 - Provide training to farmers in treatment of livestock diseases.
- Introduce and promote dairy farming and encourage animal fattening for marketing.

6. Poverty alleviation and livelihood diversification

It is estimated that 60 per cent of the population of Balochistan lives below the poverty line; almost 43 per cent of children are malnourished.³¹

The agricultural sector is the most dominant sector in Pishin district. The district is a major producer of fruits and has vast potential for developing fruit and vegetable processing and contributing to the fresh fruit juice industry. Pishin district was once famous for watermelon and grapes, which were exported to Sri Lanka and Bangladesh. Of the local workforce, 49.9 per cent of the employed labour force is in the agricultural sector, and an additional 15-20 per cent work lands irrigated by tube wells i.e. about 60,000 workers are engaged in the agricultural sector. Skilled agricultural workers were only 50.30 per cent of the total employed and active labour force. Cultivation can be extended further if a sustainable supply of irrigation water is arranged. The district holds the potential for high valued cash crops like fruits, vegetables, tobacco, potato etc.



31 Government of Balochistan (2004). Multiple Indicator Cluster Survey 2004 [website]. <<http://balochistan.gov.pk/departments/mics/MICS-4-Web/4-6-Results-Child%20Protection.pdf>>. Accessed 10 October 2011; World Bank (2007). Promoting Rural Growth and Poverty Reduction [website]. <<http://www.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/PAKISTANEXTN/0,,contentMDK:21309038~pagePK:141137~piPK:141127~theSitePK:293052,00.html>>. Accessed 3 January 2012.

Economic activities revolve mainly around landowners, traders, cultivators, herd owners, and labourers. Landowners and traders either cultivate the land themselves or employ *bazgars* and tenants including Afghan refugees. Local people, refugees and nomads own herds. The labour force, mainly male, is about 20 per cent of the total population. Only a negligible percentage of locals are employed in the mining sector.

Private enterprises and the provincial government play a significant role in the provision of agricultural inputs and services. Diversification into new industries and addition of value-added at the district level can have a significant impact on poverty, employment and income generation, especially for women. The economy of the district is largely confined to agriculture, livestock, commerce and trade. There are few factories in the district: three are ice factories, one concrete pole factory at Saranan, and there are a few small semi-manufacturing units in Pishin Bazaar. There are also many *naswar* making units in Pishin Bazaar, which pose both environmental and health hazards. Retail trade is the major economic activity. In the mid 1990s, there were 732 retail, wholesale and semi-manufacturing units in the district employing, 1,478 workers.

Despite the potential, industry remains undeveloped in Pishin district mainly due to non-availability of local entrepreneurs and skilled labour, and lack of capital. There were

plans to make Bostan an industrial estate, but they have not been implemented yet.

The poor rely heavily on natural resources but their access to and control over natural assets and resources is limited.

The thrust of the GoB's development programme in the context of its Poverty Alleviation Strategy (1999) was to raise the standard of living in the province with an initial investment of Rs. 1.27 billion and estimated return of Rs. 2.26 billion. It included provision of 270,000 jobs for providing sustainable livelihood to 70 per cent of the poor population. However, this strategy could not be implemented due to paucity of funds and a shift in provincial priorities.

6.1 Labour force

Pishin District Government will coordinate and lobby with the provincial government on the district's priorities, particularly human resource development. Technical, professional and vocational training facilities will be strengthened, expanded or created to meet the existing and potential demand in the district and outside markets. Skills based teaching programmes that can facilitate employment will be implemented: construction material fabrication units, mining, tourism, agricultural engineering, commercial agriculture and livestock, and poultry farming.



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Labour opportunities are few and far between

Labour-related laws will be enforced including the: (i) Employees Social Security Ordinance 1965, (ii) Employees Old-Age Benefits Act 1976, (iii) Employment of Children Act 1991, and (iv) The Minimum Wages Ordinance 1961. These labour laws will provide social insurance to workers.

Under the Employees Social Security Ordinance, all establishments employing more than five workers are required to register their employees and pay for their social security benefits. Similarly, all establishments employing more than 10 workers are required to register their employees for old age pension benefits. Workers are generally not registered in the district for any of these benefits.

Pishin District Government will coordinate with the Employees Old-Age Benefits Institution (EOBI) to register these establishments and their workers. Social security provides health care facilities to all workers and their families. It also provides wages in the event of a chronic disease that requires long-term treatment, and EOBI provides pension to workers on retirement. One time registration provides coverage for life, even if the worker changes jobs.

According to the Population Census 1998, the total labour force in Pishin district, is 31.91 per cent (59.87 per cent males and 0.74 per cent females). 70.99 per cent of total employed workers (71.48 per cent males and 42.17 per cent females) were self-employed in the district. The overall unemployment rate was 36.16 per cent (36.53 per cent males and 2.88 per cent females).³²

In Pishin District, 1.2 per cent family members were working outside the country in 2008; 1.2 per cent received remittances on an yearly averaging around Rs. 25,651.

According to MICS, 16 per cent of the population (aged more than 10 years), 15 per cent (aged more than 15 years), 48 per cent (aged 10 to 17 years), and 30 per cent (aged 15 to 24 years) was unemployed. The ratio of female unemployment was almost double that of males in all age classes.³³

The proportion of children in the total number of workers (although child labour is illegal) was 4.7 per cent. The ratio of female workers in enterprises and manufacturing sectors is negligible.

6.2 Economic opportunities and livelihood diversification

The GoP's new economic policy outline is based on the premise that partnerships between the public-private sectors will become the engine of economic and industrial growth, making workers partners in development projects.

The World Bank/Asian Development Bank's Balochistan Economic Report (2008)³⁴ included priority areas, and strategies for realising the provinces' potential. Taking from these, the Pishin District Government will focus on supporting urbanisation, profitable enterprises, productive jobs, and creating employment links for male workers outside the district.

Keeping in line with the economic policies, Pishin District Government will prioritise agriculture; value addition in minerals; ecotourism; and support services in urban areas.

The business environment can be enhanced with transport, education, access to information and improved infrastructure. As part of its Livelihood Diversification Plan, Pishin District Government is committed to the following guiding principles:

1. Develop and efficiently use those activities and physical infrastructure that are critical to the long term economic health of Pishin;
2. Ensure decisions and actions are affordable and do not accumulate liabilities for future generations; and
3. Ensure that economic benefits and resources are adequately distributed so as to avoid inequities.

32 Population Census Organisation (1998). District Census Report Pishin 1998. Islamabad, Pakistan: Government of Pakistan.

33 Government of Balochistan (2004). Multiple Indicator Cluster Survey 2004 [website]. <<http://balochistan.gov.pk/departments/mics/MICS-4-Web/4-6-Results-Child%20Protection.pdf>>. Accessed 10 October 2011.

34 Asian Development Bank and World Bank (2008). Balochistan Economic Report Islamabad Pakistan: Government of Balochistan.

6.3 Private sector development

Recognising that the private sector is hindered by diverse factors such as high prices of utilities, administrative barriers to investment, red tape, law and order, and higher costs of inputs, Pishin District Government will lobby with the GoB for tax exemptions and other incentives for investment. Like the rest of Pakistan, the private sector has been most successful in the transport and energy (gas cylinders marketing) sectors in Balochistan. Medium to large scale private sector investments in the mining, corporate agriculture and livestock, and sanitation and waste collection sectors needs to be strengthened.

The Pishin District Government is committed to ensuring an enabling environment for the private sector especially SMEs.

Pishin district is rich in metallic and non-metallic minerals and this sector is one of the main pillars of growth in Balochistan. The Khanozai area of Karezat tehsil has an active minerals and mining sector. It also has a good education system. There are 11 Mineral development check posts of the Department in the province and also a mobile squad for checking irregularities.

The minerals are marketed in raw form. More than 50 per cent of rock chromites is inert

material. However, an up-gradation plant is in the offing. Computer modeling of chromites reserves with detailed investigation of reserves needs to be undertaken. There is also scope for developing marble and dimension stones (granite and limestone) sub-sectors in the district.

6.4 Communication and infrastructure

A communication infrastructure is vital for accelerating the pace of economic development e.g. farm to market roads, highways, railways etc. The district is served by three national highways, black and shingle roads and railways. Pishin district is linked with all other parts of the province and country through road. The closes airport facility is in Quetta. Rural roads, especially farm to market roads, are inadequate.

The important highways are from Quetta to Chaman, via Pishin and Quetta to Zhob through Karezat tehsil. Pishin is linked with Khanozai in the east and Qila Abdullah district in the west through Barshore and Hurrmazai tehsils. The Quetta-Chaman railway line (42 kilometers) passes through Pishin district. There is an abandoned concrete runway from the time of the British Royal Air force in Pishin.

Maintenance of provincial roads is the responsibility of the Communications and

Table 3: Revised PSDP for Pishin district 2010-11

SECTORS	Ongoing Schemes		New Schemes		Total		%age of Total
	Allocation	Number	Allocation	Number	Allocation	Number	
Agriculture	0	0	50	1	50	1	4.53
P.P.& H.	43.149	1	5	1	48.149	2	4.37
Communication	671.579	24	55	5	726.579	29	65.87
Water	28.881	3	50	3	78.881	6	7.15
Education	50	3	30	2	80	5	7.25
Health	15.881	3	15	2	30.881	5	2.80
Public Health Engineering	0	0	50	3	50	3	4.53
Social Welfare	0	0	28.538	2	28.538	2	2.59
Power	0	1	10	3	10	4	0.91
Total	809.490	35	293.538	22	1,103.028	57	100

Source: Government of Balochistan, PSDP 2010-2011 (Original)



Daily transportation between Pishin town and Quetta city

Work Department, headed by an Executive Engineer at the district level. There is a network of engineers, overseers and other staff members who work under him. In 2004-05, metalled and shingle roads in Pishin district covered a total road length of 980 kilometer of which 648 kilometer was shingle:

1. 332 kilometer was metalled in 2004-05
2. 419 kilometer was metalled in 2005-06 (total length - 1,067 kilometer)
3. 500 kilometer (total length - 1,148 kilometer) was metalled in 2006-07

There are a large number of unregistered/smuggled vehicles in the district. There is an adequate public bus service between Pishin Town and Quetta City.

The train to Pishin and Chaman from Quetta and back is very slow, even for tourists.

Till 2004, the coverage of telecommunication facilities in the district was very poor. It has improved since then thereafter due to the involvement of the private sector. Up to 2007, there were a total of 10,543 telephone

connections in Pishin District: 6,530 auto and 28 manual, and 3,985 Wireless Local Loop (WLL) connections. There were 19 auto, one manual, and five WLL exchanges.

Radio is both popular in villages and remote areas as a means of information and entertainment. 61.4 per cent people used radios, 13.6 per cent televisions and 22.0 per cent read newspapers regularly. Internet facilities are also available in certain areas e.g. Pishin bazaar, Khanozai and Bostan.

The number of post offices in Pishin district has been declining; there were 26 in 2000-01 to 24 in 2001-02, and 16 in 2003-04/2006-07.

6.5 Energy

An affordable and regular supply of power is crucial for basic needs such as cooking and heating; essential for adding value to and diversifying livelihoods (mechanisation of agriculture, modernisation of mining, poultry farming, ecotourism, value addition to agriculture and livestock products); and for the provision of basic social services such as education, health care and piped water.

Major sources for light are electricity, gas and kerosene oil, while major sources for fuel are firewood, animal dung, gas, Liquefied Petroleum Gas (LPG) cylinders and electricity. The use of cow dung as fuel reduces the quantity of manure which is very essential for agricultural production. The large-scale cutting and removal of vegetation for firewood has resulted in deforestation and devegetation with other alarming implications, including soil and water erosion and reduced water recharge and biodiversity.

In Pishin district, 75.6 per cent households had access to electricity. The number of fuel and power consumers by type in 2006-07 were, 24,237-19,130 domestic; 2,387 commercial; 205 industrial; and 2,509 agricultural six others. The number of domestic gas connections was 4,126.

Electricity is supplied through the national grid. There is inadequate coverage of electricity and gas. Piped natural gas supply is limited in the district. The coverage is affected by the quantum of supply and scattered nature of settlements, especially in Barshore tehsil and southern parts of Pishin tehsil. Frequently, there is scarcity of LPG cylinders, especially during winter. A limited number of households and businesses use generators during load shedding.

6.6 Ecotourism

Pishin District Government is committed to designing and launching ecotourism in the following locations:

- Bund Khush Dil Khan
- D.C. Rest House³⁵
- Pishin Bazar
- Shrine of Sheikh Farid Baba
- Shrine of Mulla Usman Akhund
- Shrine of Pir Hyder
- Shrine of Ismailzai Agha
- Shrine of Nau Gazey Baba
- Shrine of Khanai Baba
- Takatu
- *Karezat* Khanozai
- Barshore Tehsil

The district has inadequate tourist facilities, which is one of the reasons for the low number of tourists. It has a few hotels and restaurants but none of them are likely to attract tourists.

Box 13: Pishin livelihood diversification plan

Objective: Ensure diversification of livelihoods and introduction of employment opportunities in Pishin that lead to greater income and asset creation.

The Pishin Livelihood Diversification Plan will include:

- Map of markets, commercial outlets, mines, small and medium enterprises.
- Map demarcating potential new enterprises (ecotourism) or the re-location of existing enterprises (e.g. naswar units).
- Directory of market associations and credit facilities.
- Directory of provincial and federal training institutes, and private sector training institutes.
- Data on the number of current jobs by nature and sector.
- Data on unemployment, employment and number of vacancies.
- Data on sectors where employment gaps can be exploited (these may include sectors such as information technology that can be developed in the short term and sectors that will be developed in the long term such as ecotourism).
- Indicators to measure employment.
- Feasibilities for SMEs.
- Establish a monitoring and evaluation system for Pishin:
 - Targets for employment (including for phasing out child labour).
 - Targets for employment diversification.
- Establishment of bazaar association in Pishin:
 - Developing a district level market for fruits, vegetables, livestock and their products.
 - Job creation opportunities.
 - New product creation (for e.g. floriculture).
 - Market Information.
 - Link between producers and retailers and customers.
 - Ensure cleanliness.
 - Establish links to ecotourism initiatives and alternative energy initiatives.
 - Promote information technology application.
 - Make available credit facilities.
- Nurturing SMEs and skill development in Pishin. Support programme for sustainable alternative livelihood both for men and women in (credit providing agencies, feasibilities, links with the Small and Medium Enterprise Development Authority, BRSP, Export Promotion Bureau economic incentives, training, alternative energy sources) ensuring that impact on environment is assessed and mitigated:

- Tourism. Maintenance and use of natural/archaeological/historical sites with proper guides and information. These cultural assets and other tourism resources shall be preserved, interpreted and promoted for tourism.
- Interpretation and promotion of tourism assets.
- Facilitating No Objection Certificates for visits.
- Selecting and training individuals as guides and linking them with the national and international companies.
- Prioritising community-based tourism.
- Alternative energy (heating stoves, solar powered water heaters etc). Wind data and feasibility studies for Pishin for energy development in remote rural areas through dispersed application of alternate energy sources including biogas, solar panels, solar thermal and wind.
- Exploiting minerals. Marble preparing units, chromite products.
- Poultry farming and livestock.
- Low grade food uses.
- Repair of household equipment.
- Machinery maintenance and repair.
- Installation and maintenance of high efficiency irrigation systems.
- Handicrafts including woollen carpets, rugs and other woollen articles; wood work, knitting, sewing.
- Cultivation of MAPs.
- Cold storage, fruit grading and packing, and preparation of preserves.
- Strategy to encourage vocational education in Pishin. (Organise technical training of the labour force keeping in mind the local, provincial, national and foreign market requirements. Train in technical centres and vocational training institutes, on the job, in as well as in other developed areas of the province such as Quetta and Hub; encourage, catalyse and facilitate opening of standard vocational education institutions and technical training centres in the public and by the private sectors).
 - Target for value addition in Pishin for traditional economic activities, with a special focus on activities for which women bear the burden of responsibility (e.g. livestock).
- Pilots with NGOs/CSOs and private sector.
- Pishin District Government will lobby with the GoB to:
 - Establish an industrial estate; district market for fruits; establish special fruits and flowers facilities at Quetta airport.
 - Improve law and order.
 - Design an economic plan that takes into account dwindling water resources and degraded rangelands; create economic incentives for technology intensive and environmentally friendly investments; create an adaptation plan for water intensive industries.

- Provide alternatives to child labour.
- Improve the capacity in the provincial government for promoting tourism in the province.
- Request Pakistan Tourism Development Corporation to conduct a comprehensive survey of the potential tourist attractions in Pishin and develop a plan (including for the private sectors and communities).
- Preserve cultural properties and natural areas for promoting their use for tourism.
Encourage the private sector to develop tourist facilities including lodges and eating-places.
- Improve the marketing system including exclusion of intermediaries through enactment and enforcement of law; create legal links between Pishin and the Afghan and Iranian markets.
- Improve farm to market roads in Pishin.
- Encourage and support the private sector to establish a cold storage in Pishin.
- Improve the quantity and quality of agricultural machinery in Pishin.
- Limit apple cultivation in Pishin to the areas where chilling requirements are met by the climatic conditions and where water resources are not being depleted at the same time provide alternative sources of income to areas where apple cultivation is being phased out.
- Improve gender inequity in employment.

Division of labour by gender in livestock sector

Exclusively Men	Exclusively Women	Shared Tasks
Marketing	Milking and feeding	Fodder collection
Breeding	Processing by-products	Decision-making
Slaughtering	Fodder management	Type/number of animals to buy or sell
Purchasing and transportation	Caring of sick livestock	Birthing
Medicines	Hand suckling of young	
Field grazing	Processing local herbal medicines	
	Dung Management	

Box 14: Mines and minerals in Pishin

Lobby and work with the GoB:

- Tap mines and minerals in a sustainable and environmentally friendly way to improve income and diversify livelihoods in Pishin; use mines and minerals to support ecotourism (for e.g. abandoned sights) in Pishin.
- Complete the geological survey in Pishin especially of mineral rich areas with modern equipment and techniques; prepare feasibility reports; arrest the practice of gross under reporting of production of minerals.
- Most of the minerals from Pishin are exported in raw form with no value addition, limiting employment and income generation opportunities. Measures will be adopted to develop this area.
- Introduce technology for improving efficiency and quality of extracted materials, initially of celestite and fluorite and then other minerals from Pishin.
- Attract national and foreign investors to Pishin.
- Promote large scale commercial mining in Pishin.
- Improve marketing and trade networks in Pishin. Often mine owners do not get a fair price due to distantly located markets.
- Introduce Pishin specific targets and identify indicators to monitor them.
- Introduce a comprehensive training package in Pishin for workers (and potential workers) and local entrepreneurs in the mining sector:
 - Organise training for mine workers particularly on occupational health and safety issues.
 - Improve workers' safety and occupational health conditions in mines.
 - Take measures to effectively address social security needs of the workers.
 - Phase out the consumption of traditional mining methods which are inefficient and wasteful.
 - Minimise damage to animal life, landscape, and soil erosion, silting of streams which could occur from untreated mines.
 - Manage air and noise pollution.
- Lobby for the establishment of the Mineral Investment Facilitation Authority.
- Disseminate research and other information on Pishin.
- Computerise records; engage proactively with the private sector (retailers, value addition industries, mining etc) as relevant to Pishin.
- Implement the recommendations in the National Mineral Policy (1995).
- Introduce a Geographic Information system at the Directorate General of Mines and Minerals in Quetta as relevant to Pishin.

- Monitor production and increase royalty by improving auction system in Pishin.
- Conduct environmental monitoring of the mining areas and operations in Pishin.
- Issue guidelines to the mining industry in Pishin to effectively manage their waste.
- Improved transparency in decisions related to concessions and leases issued for mines etc in Pishin.

Box 15: Pishin energy plan

Adequate and regular supply of energy is crucial for livelihoods including mechanisation of agriculture, modernisation of mining, poultry farming, ecotourism, value addition of agriculture and livestock products, water and sanitation, efficient running of health facilities and educational institutions in Pishin.

In Pishin, major sources for light are electricity, gas and kerosene oil while major sources for fuel are firewood, animal dung, gas, LPG cylinders and electricity. The use of cow dung as fuel reduces the quantity of manure, essential for agricultural production. The large scale cutting and removal of vegetation for firewood is resulting in deforestation and devegetation in Pishin with several other implications including soil and water erosion and reduced water recharge and biodiversity. Major issues faced in Pishin are:

- Load shedding of electricity.
- Inflation and high price of energy which limits the volume of trade.
- Agricultural tube wells consume and waste electricity as it is not priced. Also due to regular fluctuations they overuse electricity when available.
- Limited availability and high cost of LPG cylinders.
- Inefficient use and wastage of electricity and gas.

The Energy Plan for Pishin will include a long-term environmental and economic perspective and appropriate energy goals:

- Conserve energy with efficient use and reducing transmission losses.
- Extend and expanding the supply of natural gas to the other big settlements in Pishin.
- Promote the use of coal briquettes for cooking and heating in areas where supply of natural gas will take considerable time and effort (available in Harnai and Quetta).
- Promote, with subsidy, alternate energy development including off-grid solar photovoltaic, wind energy for rural electrification; solar thermal for heavy load, especially for dispersed application; and biogas for cooking and heating.
- Introduce metering of electric-run tube wells and adopt a slab tariff on the power consumed. Alternately, shift the subsidy on power supply to tube wells, to the procurement and use of efficient irrigation systems e.g. to the use of high efficiency irrigation systems e.g. bubbler, drip and sprinkler, land levelling, water management, rain water harvesting and spate irrigation etc.

- Promote efficient use of energy (tuning of vehicles, tube wells, efficient cooking stoves, energy saver bulbs etc.)
- Promote the use of and arrange regular supply of LPG cylinders.
- Extend the supply of natural gas in Pishin to big villages at short distances from the existing gas pipeline.
- Increase the number of CNG stations and the use of CNG for vehicles in Pishin.
- Improve electricity transmission lines in to Pishin to reduce line losses.

7. Implementation



The Pishin District Government has initiated the implementation of recommendations and measures in the IDDV. The Pishin IDDV will be treated as a living document.

The IDDV is an important planning tool, serving not only as a road map for sustainable development but also as a symbol of political commitment and a reflection of the will of the people.

In the absence of democratic representation at the district level the IDDV can still in part ensure effective, efficient and equitable public sector services.

Figure 4: Phases in visioning and planning



Step One
IDDV



Step Two
Detailed sector
specific plans



Step Three
District plan
with budget

Monitoring and evaluation enables course correcting of strategic directions and regulating service delivery. For this purpose it needs to address the following:

1. Is the IDVV an effective tool?
2. Are services efficient?
3. Are services equitable?
4. Are targets likely to be achieved?

A simple three-step approach will be used for implementing the IDVV.

❖ **Step One:** preparing sector wise action plans based on livelihood diversification, social sector, natural resource plan, agriculture and livestock, and M&E. Strategies for gender, landuse, energy, mines and minerals, disaster mitigation and preparedness, and culture and recreation. The Pishin District Government will coordinate and prepare these plans/strategies jointly with appropriate line departments and directorates on a simple template. This will include the following:

- a. Baseline data;
- b. Sector specific indicators and targets;
- c. Mapping available resources;

- d. Priority reform areas for policies, Rules, Regulations and procedures;
- e. Priority investment areas including human resources, systems, management and infrastructure;
- f. Financial implications of above; and
- g. Tasks spelt out in terms of short, medium and long term (following government budgetary cycle).

❖ **Step Two:** Merge plans to arrive at a detailed district strategy and budget.

❖ **Step Three:** Align finances and allocations to strategy and budget.

During implementation, the objective of the IDVV to plan, change, promote, support and monitor sustainable development in Pishin district will remain its guiding principle.

To achieve the immediate short-term targets of the IDVV the Pishin District Government will:

1. Create an enabling environment for:
 - Urbanisation and increasing population density; and
 - Institutions, communities, the private sector, civil society organisations, academia and the media to participate fully in the development process.



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Geo-membrane technology for water conservation

2. Strengthen:
 - The natural resource base, curbing and where possible reversing degradation, and promoting sustainable development.
3. Develop and promote:
 - Alternative and sustainable livelihoods aimed at poverty reduction, while at the same time reducing the degradation of natural resources; and
 - Focus on the agricultural and mining industries. Work with fruit and vegetable farmers to see how their income can be increased. Explore other new value added sectors.
4. Create capacity by:
 - Establishing linkages with training and education facilities at the provincial and national level to develop human resources;
 - Opening new marketing and information dissemination channels; and
 - Learning from the experiences of community-based initiatives elsewhere in the country.
5. Mainstream:
 - Gender concerns and eliminate gender disparities. Adapt to social changes in society, particularly brought in by globalisation, while preserving positive cultural values, norms and traditions;
 - Equity and the needs of the poor and vulnerable;
 - Climate change;
 - Public participation in planning of GoB's programmes and projects; and
 - Transparency and dissemination of information.

There is a significant variance between provincial allocations and district priorities but also intra-sectoral allocations are highly inequitable. The PSDP 2008-09 for Pishin district reveals that the maximum funding is for roads followed by education, irrigation, health and information technology. In 2009-10 again the maximum funding is for roads

followed by education, public health engineering and power. In PSDP 2010-11, roads get a heavy share of 374.147 million (42.3 per cent of total allocated amount for Pishin district for 2010-11), other major sectors in descending order are health (93 million, 11.25 per cent), power (90 million, 10.9 per cent) and education (75 million, 9.1 per cent). A review of sectoral fund allocation indicates that the revenue and development budget for other sectors has been very low. It is important for balanced economic growth of the district to reprioritise investment of limited resources.

Pishin district is committed to prioritising O&M over capital expenditure and to ensure that services are financially feasible.

Donors can be approached to support the programmes, projects and priorities of the IDDV since these constitute the home-grown agenda, which has been developed through a wide consultative process. Donors and international agencies, which have been supporting programmes and projects in Balochistan include UNDP, ADB, WB, EKN, USAID, Global Environment Facility, EU, UNICEF, JICA, Kuwait Fund, CIDA, DFID, FAO, IUCN, WWF. They may be interested in funding parts of the IDDV.

The Pishin District Government is going to work with the GoB proactively on the following priority areas:

- Data and information
- Accuracy of data pertaining to the district;
- Ensuring accuracy of the Population Census; and
- Ensuring accuracy of the district Map.

Pishin District Government will lobby for maps that represent the exact area of the district, tehsil-wise and mauza-wise and will lobby for their notification in the gazette and dissemination to relevant agencies for planning:

1. Improve the law and order and reduce insecurity and threat to life and assets:
 - a. Work on compliance and enforcement of law;
 - b. Ensure security of schools; and

- c. Arrest the erosion of harmony among ethnic groups.
- 2. Build a human resource system that is:
 - a. Performance based;
 - b. Curbs absenteeism of public sector staff;
 - c. Reduces vacant posts in the public sector;
 - d. Extends duration of posting; and
 - e. Enforces sanctions and penalties.
- 3. Formulate a capacity building plan which includes:
 - a. Development and training of Pishin District Government staff;
 - b. Raising awareness on gender, climate change, poverty; and
 - c. Introduce internet, emails and electronic system in the district government.
- 4. Introduce a comprehensive regulation and monitoring system:
 - a. Enforce Rules, Regulations and procedures;
 - b. Simplify bureaucratic procedures at the district level;
- c. Address corruption and negligence (including shifting the balance of allocations away from capital expenditure to O&M);
- d. Pilot a Citizen Police Liaison Committee; and
- e. Establish a Public Grievance Redressal System.
- 5. Support the disaster mitigation and preparedness strategy:
 - a. Negotiate incentives for the implementation of the provincial disaster risk management plan;
 - b. Hold disaster management and seismic briefings/trainings;
 - c. Establish a system of preparedness for reducing losses;
 - k. Agree on an emergency drinking water plan for citizens and livestock;
 - m. Collate and disseminate reliable data on temperature, precipitation, run-off, recharge, soil moisture and ground water in order to determine the impact and intensity of drought; and
 - o. Establish a drought emergency fund at the provincial and national levels.
- 6. Support the district in mainstreaming gender, poverty and climate change:

Figure 5: Ensuring transparency

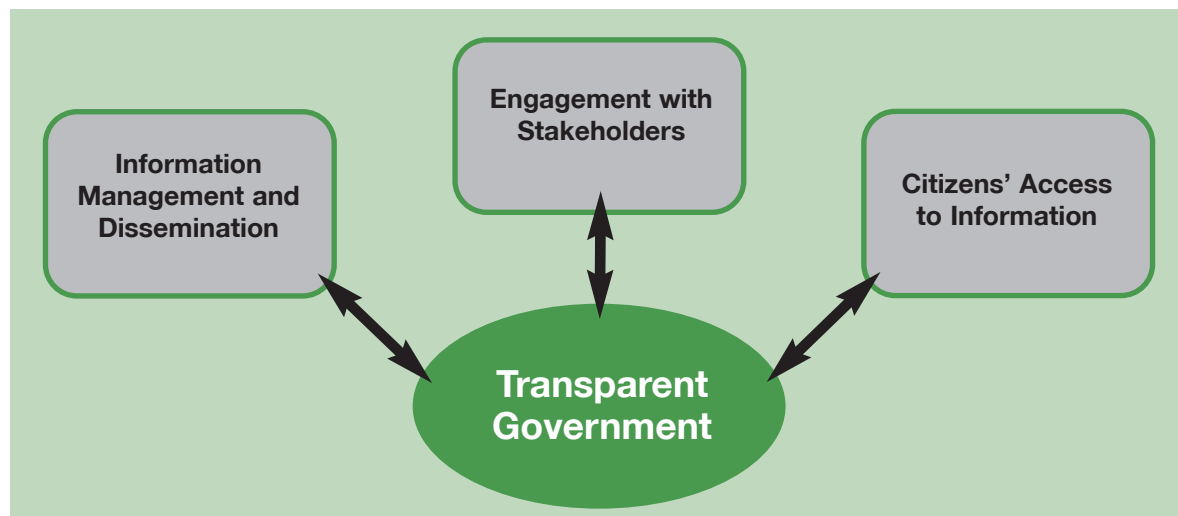
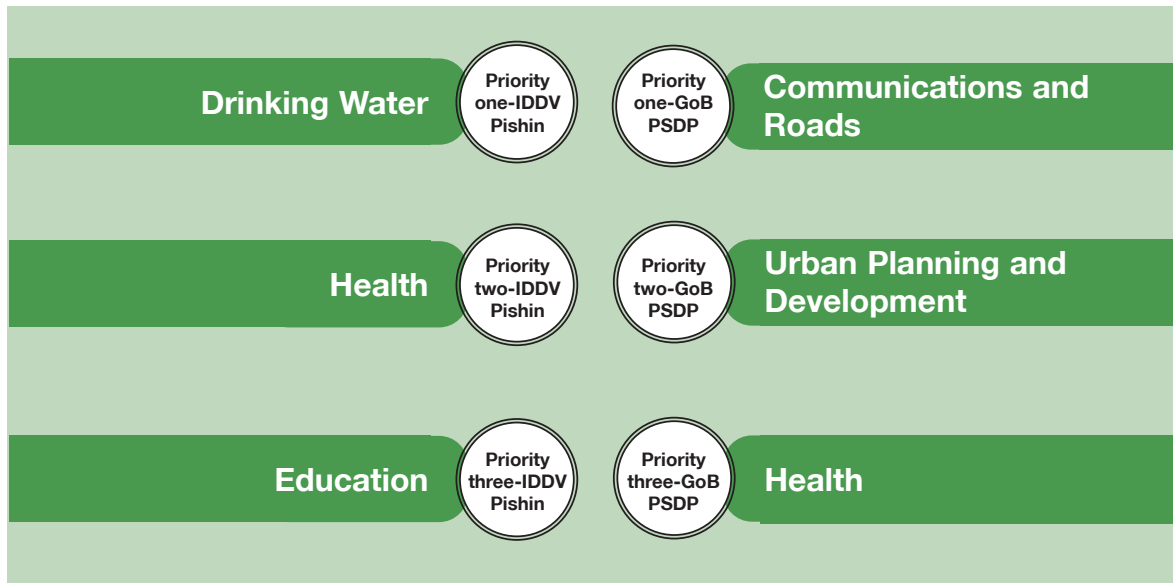


Figure 6: Mismatch between priorities in Pishin district and provincial allocations

- a. Conduct a malnourishment analysis of women, children, disabled and other vulnerable groups;
 - b. Review laws that are systematically violated (inheritance law, including trading of women under the *jirga* system etc);
 - c. Raise awareness on laws related to women's rights e.g. The Protection against Harassment of Women at Workplace Bill 2010 and the Prevention of Domestic Violence Act 2008;
 - d. Work with federal government and GoB on the empowering women especially through the Benazir Income Support Program; and
 - e. Provide incentives for female teachers and female doctors to work.
7. Support the district education plan by prioritising:
- a. Training of teachers; introducing incentives for further studies; encouraging teachers to compete for federal government managed scholarships and training opportunities; provide transport and accommodation to teachers for remote areas; review eligibility criteria for teachers (in particular relaxing the age limit for teachers);
 - b. Increase non-salary allocation of operational expenses; increase allocations for travel for monitoring staff;
 - c. Improve infrastructure in functional schools and health facilities; upgrade single teacher schools into multi teacher schools;
 - d. Introduce the subject of governance, sustainable development, environment and gender; and
 - e. Build a Women's Degree College.
8. Support the district health plan:
- a. Arrest communicable diseases, particularly managing the transmission of diseases across the porous Pakistan-Afghanistan border; and
 - b. Improve capacity of health department staff particularly for preventive health care and mental health.
9. Support the district water and sanitation plan by:
- a. Ensure investments are made as per a strategic plan; and

- b. Prioritise O&M expenditure.
10. Support the district natural resource management plan:
- a. Phase out the subsidised flat rate of electricity for tube wells;
 - b. Subsidise farmers practicing rain-fed farming and those using diesel pumps;
 - c. Incentivise groundwater recharge by adopting water conservation interventions;
 - d. Shift the subsidy on power supply to tube wells, to the procurement and application of efficient intensive irrigation systems;
 - e. Expand the management plans of protected areas, and the re-introduction plans of species that have been endangered and wiped out;
 - f. Strengthen GoBs staff in the districts in the following areas: conducting scientific surveys and studies, wildlife and wetland inventory, resource planning, management and assessment for in-situ conservation and sustainable employment of protected areas and species, communication and awareness raising, social mobilisation and community participation, and programme and project planning;
 - g. Collaborate to ensure the compliance and enforcement of wildlife, forest and environmental laws; and
 - h. Seek support to raise awareness on the current and potential social, economic, environmental and cultural value of biodiversity, wildlife and protected areas (the low provincial funding, due to low political will and consequent low priority for wildlife, has remained a significant constraint).
11. Support the implementation of the district agriculture and livestock plan:
- a. Coordinate between Livestock, Rangelands and Forest Department for new programmes and projects;
 - b. Coordinate with the Provincial Disaster Management Authority for information on climate change, particularly droughts; and
 - c. Assess the health of livestock and poultry in the district including nutrition/low feed due to over grazing.
12. Support the district livelihood diversification plan:
- a. Identify openings by sectors and skill sets, with a special focus on women and the poor;
 - b. Create incentives for the private sector to provide technical education including for women;
 - c. Develop Pishin as a satellite of Quetta with strong commercial and trade links;
 - d. Improve economic competitiveness by reducing cost and reliability of energy;
 - e. Lobby with the Quetta Electricity Supply Corporation to improve electricity;
 - f. Promote, pilot, demonstrate and subsidise alternative energy sources;
 - g. Promote efficient application of energy;
 - h. Promote the use and supply of LPG cylinders; and
 - i. Promote CNG stations for vehicles.
13. Lobby for a greater share from the provincial financial pool.

Box 16: Pishin M&E plan

The Pishin M&E Plan will include:

- Baseline indicators for all sectors.
- Indicators to measure the effectiveness of the IDDV.
- Monitoring progress in the implementation of the IDDV.
- Qualitative and quantitative data.
- Documenting and dissemination good practices and lessons learnt.
- Pilots with NGOs or CBOs and the private sector e.g. participatory monitoring.

Box 17: Pishin culture and recreation strategy

Sports and social activities, especially youth related activities include cricket, football, volleyball, wrestling, cycle and motorbike racing, singing and dancing. The middle aged and elderly enjoy folk dancing. *Eid-ul-Fitar* and *Eid-ul-Azha* are celebrated as the main festivities of religious and cultural importance. Currently, there is very little in terms of sports facilities or other healthy cultural activities. Women have negligible opportunities for recreation outside of their homes.

The goals of the cultural strategy for Pishin include preserving, developing, promoting and using the cultural assets such as folklore, songs, music, handicrafts, *urs*, *melas*, sports, food, etc.; establishing and connecting local arts and cultural organisations to the public across Pishin, province and country. This will also promote economic development. The strategy will:

- Develop facilities and promoting cultural activities to make the district enjoyable to the local people and tourists alike.
- Establishing a Pishin Museum to display all aspects of the culture and history of Pishin.
- Launch domestic tourism efforts gradually, expanding it in time to foreign tourism.
- The traditional handicrafts include embroidery work on *kameez* and *shalwar* of children and women, on caps, on bed and pillow covers, etc. sheep wool sweaters can be marketed. The Social Welfare Department initiated a training programme for women to improve and popularise traditional handicraft making. International donors have provided some financial assistance through local NGOs for training women in marketing of handicrafts. This should be supported in the future.

Annexes



Annex I: Vision 2030

Economic Growth: To build a nation whose development is measured by economic growth as well as quality of life enjoyed by its people.

Society: To evolve into a tolerant and productive society, which is at peace with itself and with the rest of the world, within a structure of sovereignty and security

Rule of law: To establish the rule of law as a bedrock principle impacting on all walks of life

Role of the state: To encourage freedom of enterprise and innovation in the market place together with state responsibility for the provision of basic services to all citizens, including education, health care, water and sanitation, shelter, and security under law

Employment with special emphasis on women rights: To make employment and employability, a central theme in economic and social policies, with special emphasis on the rights of women

Poverty Reduction: To eliminate absolute poverty and ensure social protection for the weak and the vulnerable

Education: To generate and absorb knowledge and harness technology for the good of all while promoting social sciences and humanities as an essential branch of knowledge

Economic stability: To sustain an average growth of 7–8 per cent in the long term through effective investment and saving strategies while maintaining macro-economic stability

Economy: To take advantage of globalisation through enhanced competitiveness in a global economy relating to commerce, manufacturing and services, with increased diversity and quality of content

'Brand Pakistan': To facilitate the emergence of "Brand Pakistan", which will result in several large conglomerates becoming global players, and many more regional hubs and centres established in Pakistan

Governance: To re-design the structures of state and instruments of government in terms of participation, delivery of services, and good governance

Demographic transition: To maximise dividends from the demographic transition in the coming years, while avoiding the pitfalls

Energy: To manage the anticipated growing competition for access and ownership of resources and energy both regionally and globally

Climate change: To prepare for climate change, and its likely unfavourable implications

Natural resources: To minimise wastage of natural resources as an important tool for preserving inter-generational equity

Urban growth: To prepare for the dynamics and imperatives of growth of large cities, urban concentrations and expected internal and international migration

Education and employment: To achieve significant breakthroughs in the sectors of education, employment and energy while consolidating and expanding the gathering momentum in infrastructure and service sector

Source: Government of Pakistan, Planning Commission <<http://www.pc.gov.pk/chapterwise.html>> Accessed 9 October 2011

Annex II: Millennium development goals

Goal 1: eradicate extreme poverty and hunger

Target 1.a: halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day

Target 1.b: achieve full and productive employment and decent work for all, including women and young people

Target 1.c: halve, between 1990 and 2015, the proportion of people who suffer from hunger

Goal 2: achieve universal primary education

Target 2.a: ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

Goal 3: promote gender equality and empower women

Target 3.a: eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015

Goal 4: reduce child mortality

Target 4.a: reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

Goal 5: improve maternal health

Target 5.a: reduce by three-quarters the maternal mortality ratio

Target 5.b: achieve universal access to reproductive health

Goal 6: combat HIV/AIDS, malaria, and other diseases

Target 6.a: have halted by 2015 and begun to reverse the spread of HIV/AIDS

Target 6.b: achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it

Target 6.c: have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

Goal 7: ensure environmental sustainability

Target 7.a: integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources

Target 7.b: reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss

Target 7.c: halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

Target 7.d: by 2020, to have achieved a significant improvement by 2020 in the lives of at least 100 million slum dwellers

Goal 8: develop a global partnership for development

Target 8.a: develop further an open, rule-based, predictable, non-discriminatory trading and financial system

Target 8.b: address the special needs of the least developed countries

Target 8.c: address the special needs of landlocked countries and small island developing states

Target 8.d: deal comprehensively with the debt problems of developing countries

Target 8.e: in cooperation with developing countries, develop and implement strategies for decent and productive work for youth

Target 8.f: in cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries

Target 8.g: in cooperation with the private sector, make available the benefits of new technologies, especially information and communication

Source: United Nations Development Programme 2000; Millennium Development Goals <www.un.org/millenniumgoals/goals> Accessed 6 October 2011

Annex III: Citizens Community Boards in Pishin

Sr. No.	Name of CCB	Union Council	Tehsil
1	Humara CCB Shen Tangai	Khushab	Karezat
2	Pakistan CCB Pishin	City 1	Pishin
3	United CCB Khanozai	Khanozai	Karezat
4	New Karaz CCB Khanozai	Khanozai	Karezat
5	Manzaki Bostan CCB Pishin	Bostan	Karezat
6	Progressive CCB Machan city 2 Pishin	City 2	Pishin
7	Surkhan CCB new surkhan pishin	Bazar Kona	Pishin
8	District youth CCB Pishin	City 1	Pishin
9	Huaasn CCB killi abduh jan	Yaro	Karezat
10	Youth CCB Nignda Pishin	Khanozai	Karezat
11	Balochistan CCB Pishin	City 1	Pishin
12	Ithad naujawana CCB 2erbela Pishin	Kerbala	Pishin
13	Engjini CCB Barshore	Engjini	Barshore
14	Mahangai CCB Barshore	Barshore	Barshore
15	CCB Walang haqdad	Walma	Barshore
16	CCB Sugi thangai	Khanozai	Karezat
17	Al Khidmat CCB Pishin	City 1	Pishin
18	Zawar Karaz CCB Khnozai	Khanozai	Karazat
19	CCB Pot Zakeryazai	Barshore	Pishin
20	CCB Chachobi Barshore	Ibrahim Khan	Barshore
21	CCB Sara Khawa Barshore	Kaza Wala	Barshore
22	CCB Ghariragi Barshore	Ibrahim Khan	Barshore
23	CCB Walang Masazai	Khanozai	Karezat
24	CCB Killi Syed Abdad Pishin	City 2	Pishin
25	CCB Killi Syed Kalan	City 1	Pishin
26	CCB Khudai Dost	City 1	Pishin
27	CCB Malk Sultan		Pishin
28	CCB Young Walfare Society Pishin	City 1	Pishin
29	CCB H Abdul Rahim Khan Mulhala Pishin	City 2	Pishin
30	Alkhidmat CCB Hynamzai	Hajan Shakarzai	Pishin
31	Milli CCB Khanozai		Karazat
32	Walma CCB Barshore	Walma	Barshore
33	Walgi CCB	Walma	Barshore
34	Killi Murgha Zakaryazai CCB		Karezat
35	Killi Malizai CCB	Malizai	Pishin
36	Khidmat-a-Khalq CCB	Malizai	Pishin
37	Killi Manzaki CCB	Manzaki	Pishin
38	Karazat CCB	Khanozai	Karezat
39	Killi babibzai CCB		Pishin
40	Killi Karbala CCB	Karbala	Pishin
41	Bund Khushdil Khan CCB		Pishin
42	Anjuman Killi Tarata CCB	Bazar-e-Kona	Pishin
43	United Yaro CCB	Yaro	Karezat
44	Itihad CCB Killi Lamarin		Karezat
45	Killi Waryashin Rod Malazai	Khanozai	Karezat
46	Baila Tehsil Barshore CCB		Barshore
47	Killi Balla Barshore CCB		Barshore
48	Killi Malik Yar CCB	Malikyar	Pishin
49	Sahara CCB Ziarat Toba Kakari	Toba Kakari	Barshore
50	Insaaf Mandowaila Killi Malik Alam	Barshore	

Sr. No.	Name of CCB	Union Council	Tehsil
51	Murgha CCB	Walama	Barshore
52	Mirzai CCB Killi hajyan	Balozai	Karezat
53	Alfalah CCB Pishin	Pishin	Pishin
54	Chand CCB	Manzari	Pishin
55	CCB Kamaizai	Malikyar	Pishin
56	Bala CCB	Barshore	Barshore
57	Al Fahah CCB Killa Marsina	Zairat	Karezat
58	Peoples CCB	Yaru	Karezat
59	Al-Khidmat CCB Killi Baidana	Barshore	Barshore
60	CCB Mohala Allah Abad	Karabala	Pishin
61	CCB Killi Katabahg	Shadazai	Pishin
62	CCB Killi Ajram	Ajram	Pishin
63	Star CCB Killi Mohammad Din Coloney	Pishin	Pishin
64	Bostan CCB	Bostan	Karezat
65	Sabhoon CCB Tobsnas	Bataiza	Pishin
66	Khushai CCB	Manzari	Pishin
67	Dukhtaran Millat CCB	Bazare-e-Kona	Pishin
68	Zarghoona CCB	City 2	Pishin
69	Chiristan CCB	Pishin	Pishin
70	Daryan CCB Killi	Dislora	Karezat
71	Khidmat CCB	Manzari	Pishin
72	CCB Killi Issakhai	Bostan	Karezat
73	CCB Killi Jan Mohammad Issa Khail	Bostan	Karezat
74	CCB U/C Zairat	Zairat	Karezat
75	Spinzar Masan CCB	Niganda	Pishin
76	Dawain CCB	Malizai	Pishin
77	Shaista CCB	Malikyar	Pishin
78	Hackal CCB	Saranan	Pishin
79	CCB U/C Ghaiz	Ghaiz	Barshore
80	CCB Killi Dag	Kazawailah	Barshore
81	Shekhaizai CCB	Malikyar	Pishin
82	Chand CCB	Ghaiz	Barshore
83	Hamdrad CCB	Bazare-e-Kona	Pishin
84	The Khuda-u-Tobra CCB	City 2	Pishin
85	Hillal CCB Kut	Kut	Barshore
86	Khilji CCB	Kut	Barshore
87	Samzai CCB	Hajan Shakarzai	Pishin
88	Azizabad CCB	City 2	Pishin
89	New Shamaya CCB	City 1	Pishin
90	Arman CCB	City 1	Pishin
91	Youth CCB IDSF	City 2	Pishin
92	Young Bataza CCB	Bataiza	Pishin
93	Alazai CCB	Aliazai	Pishin
94	Faraj CCB	Huramzai	Pishin
95	Haiwad CCB Killi Shinghari	Ghangalzai	Pishin
96	Hope CCB Killi Samzai	Hajan Shakarazai	Pishin
97	Iqra CCB Killi Tora Shan	Bataiza	Pishin
98	Adil CCB Killi Huramzai	Huramzai	Pishin
99	CCB Killi Janobi Hajizai	Ganzalzai	Pishin
100	Abbaseen CCB	City 2	Pishin
101	All-Fallah Muchan	City 2	Pishin
102	Al-Khidmat CCB Machan	City 2	Pishin
103	Ghrshinan CCB	Rod Malazai	Karezat

Sr. No.	Name of CCB	Union Council	Tehsil
104	Gehoun sonza CCB	Mughtain	Karezat
105	CCB Talari Shabunzai	Mundozai Barshore	
106	CCB Gulshun Aaza	Mundozai	Barshore
107	CCB Poti Mongalzai	Kazawailah	Barshore
108	CCB U/C Bagh Barshore	Bagh	Barshore
109	Al-Shakar CCB Killi Shakarzai	Hajan Shakarzai	Pishin
110	Jajizai CCB	Saranan	Pishin
111	Aman CCB Killi Ajram	Ajram	Pishin
112	Khushal CCB	Malikyar	Pishin
113	Zarghoon Khutok	Bagh	Pishin
114	Aman Cristian CCB	City 1	Pishin
115	Hawad CCB	Saranan	Pishin
116	Young CCB Killit Gul Mohammad	Kazawailah	Barshore
117	Shahi CCB Killi Khudaidadzai	Saranan	Pishin
118	Nasrut CCB	Alizai	Pishin
119	Gulzar CCB	Mundozai	Barshore
120	Astonish CCB	City 2	Pishin
121	Youth Welfare Society CCB	Barshore	Barshore
122	Yasir CCB	Saranan	Pishin
123	Noh Bahar CCB	Balozai	Karezat
124	Global CCB	Mughtain	Karezat
125	Shaheen CCB Killi Sharan	Dislora	Karezat
126	Sharafat CCB	Ghaiz	Barshore
127	CCM Moaz Tangi	Bagh	Barshore
128	Malalai CCB	Yaru	Karezat
129	Humdard CCB Bala Niganda	Balozai	Karezat
130	Shaheen CCB	Faizabad	Karezat
131	Akhunzada CCB	Malikyar	Pishin
132	Shaheen Ragha CCB	Bagh	Barshore
133	Al-Hikmat CCB	Mughtain	Ka
134	Chaman CCB	Malikyar	Pishin
135	Youth CCB Killi Qasimzai	Barshore	Barshore
136	Awaz CCB	Hajian Shakarzai	Pishin
137	Ali CCB Killi Alizai	Alzai	Pishin
138	Poiner CCB	City 1	Pishin
139	CCB Killi Khan Mohammad	Hajan Shakarzai	Pishin
140	CCB Killi Chukai	Bostan	Karezat
141	Valentry CCB Killi Yaru	Yaro	Karezat
142	Paghman CCB Surkhab	Bazara Kohan	Pishin
143	Cityzin CCB Killi Road Malazai	Road Malazai	Karezat
144	Hamdard CCB Killi Gagalzai	Ganzalzai	Pishin
145	Qase CCB Killi Chur Badizai	Huramzai	Pishin
146	Pak CCB	Bazara Kohan	Pishin
147	Adal CCB Toba	Injinai	Barshore
148	Alfajar CCB Killi Shadizai	Shadizai	Pishin
149	Pak CCB Killi Tor Tangai	Barshore	Barshore
150	Educational Development CCB	Balozai	Karezat
151	Inbbisina CCB	City 1	Pishin
152	Zarkhalan CCB	Huramzai	Pishin
153	Alfala CCB Tokhi weria	Kach Hasenzai	Barshore
154	Ethiad CCB	Faizabad	Karezat
155	Zareef Abad CCB	Batazai	Pishin

Annex IV: Data Tables

Population:

Table-1. Population of Pishin district (1998 and projected till 2021)

Year	Population
1998	367,183
2001	397,000
2004	425,000
2011	496,000
2021	600,000

SOURCE: District Census Report Pishin, 1998; National Institute of Population Studies, 2010

Table-2. Salient features of the population in Pishin district

ADMN-UNIT		PISHIN DISTRICT	BARSHORE SUB-DIVISION	KAREZAT SUB-DIVISION	PISHIN SUB-DIVISION including Hurramazai Tehsil
AREA(km2)		7,819	-	-	-
POPULATION-1998	BOTH SEXES	367,183	95,132	75,416	196,635
	MALE	196,330 -53.47%	50,954	40,110	105,266
	FEMALE	170,853 -46.53%	44,178	35,306	91,369
	SEX RATIO	114.9	115.3	113.6	115.2
	POPULATION DENSIT/km2	47	-	-	-
	URBAN PROPORTION	6.3	-	-	11.7
	AVERAGE HOUSEHOLD SIZE	6.8	8	6.7	6.3
POPULATION 1981		202,256	43,182	35,795	123,279
1981-98 AVERAGE ANNUAL GROWTH RATE (%AGE)		3.57	4.75	4.48	2.78

SOURCE: District Census Report Pishin, 1998

Table-3. Union council-wise population in Pishin district

Tehsil/ S. No.	Pishin		Karezat		Barshore		Hurramzai	
	Union Council	Population	Union Council	Population	Union Council	Population	Union Council	Population
1	Pishin Bazar (I)	22,955	Barshore	8,851	Yaru	12,031	Alizai	5,880
2	Muchan	10,275	Kazha Viala	10,092	Bostan	10,583	Gangalzai	12,858
3	Bazaar Kona	15,013	Kut	10,461	Khanozai	4,227	Hajiyan Shakerzai	9,680
4	Batezai	16,836	Bagh	9,215	Rod Mulazai	10,877	Manzari	15452
5	Dad Khanzai	10,663	Mandozai	7,174	Dilsora	11,893	Hurramzai	14,710
6	Malizai	11,238	Ziarat	5,270	Faiz Abad	11,183		
7	Karbala	14,017	Behram Khan	7,641	Mughtian	10,994		
8	Saranan	10,151	Bela	7,213	Balozai	8,064		
9	Ajram	95,45	Kach Hassanzai	9,667	Khushaab Shadizai	5,909		
10	Malikyar	13,543	Injinai	5,355				
11	Manzaki	75,45	Ghezh	7,249				
12	Shadizai	5,184	Walma	7,689				
Total		146,965		95,877		85,761		58,580
Grand Total								387,183

SOURCE: District Census Report Pishin, 1998

Table-4. Rural localities by population size and sex in 1998

Rural Localities by Population Size	Both Sexes	Male	Female
> 5,000	116,507	62,310	54,197
2,000-4,999	107,197	56,384	50,813
1,000-1,999	55,146	29,804	25,342
500-999	29,070	15,717	13,353
200-499	23,186	12,521	10,665
Less than 200	13,122	7,158	5,964

SOURCE: District Census Report Pishin, 1998

Table-5. Number of rural localities in 1998

Rural Localities by Population Size	Number of Rural Localities
5,000 AND ABOVE	15
2,000 - 4,999	36
1,000 - 1,999	41
500 - 999	43
200 - 499	67
Less than 200	135

SOURCE: District Census Report Pishin, 1998

Housing and Settlement:

Table-6. Construction material consumed in roofs in Pishin district (1998)

Material Consumed In	Housing Units
RCC/RBC	868
Cement/Iron Sheets	2,172
Wood	48,673
Others	2,335

SOURCE: District Census Report Pishin, 1998

Table-7. Construction material consumed for outer walls in Pishin district

Material	Housing Units
Baked Bricks/Blocks/Stones	3,258
Un baked Bricks / Earth Bound	46,042
Wood	3,381
Others	1,367

SOURCE: District Census Report Pishin, 1998

Table-8. Housing units in Pishin district by tenure and material used in rural and urban areas

Construction Material			Housing Units				
			Owned	Rented	Rent-Free	Total	Percent
Construction Material Used	Outer Walls	Baked Bricks / Blocks / Stones	2,850	214	194	3,258	6.03
		Unbaked Bricks / Earth Bound	43,049	527	2,466	46,042	85.19
		Wood	3,053	61	267	3,381	6.26
		Others	1,215	27	125	1,367	2.53
		Total	50,167	829	3,052	54,048	
	Roofs	RCC / RBC	748	63	57	868	1.61
		Cement / Iron Sheets	1,838	146	188	2,172	4.02
		Wood	45,492	571	2,610	48,673	90.06
		Others	2,089	49	197	2,335	4.32
		Total	50,167	829	3,052	54,048	100
		Percent	92.82	1.53	5.65	100	-

SOURCE: District Census Report Pishin, 1998

Education:

Table-9. Education statistics of Pishin district-government educational institutions (2008)

S. No.	Category of Institution	Number of Institutions			Number of Teachers	
		Boys	Girls	Total	Male	Female
1	Virtual University	-	-	1		
2	Government Degree College Pishin	2	-	2	72	-
3	Government Intermediate College	3	2	5	27	27
4	Elementary Colleges	1	1	2		
5	Model High School	1	-	1		
6	High Schools	27	5	32	569	154
7	Middle Schools	44	26	70	533	261
8	Primary Schools	578	147	725	880	454
	Total	656	181	837		

SOURCE: BEMIS, 2008

Table-10. Trend of enrolment of boys and girls in 2008-09 (Pishin)

	Boys	Girls
Kachi	11,325	6,889
Pakki	7,175	4,282
2	5,794	3,541
3	4,561	2,764
4	3,790	2,135
5	2,895	1,608
6	2,234	859
7	1,663	647
8	1,324	484
9	923	356
10	896	319

SOURCE: BEMIS, 2008-09

Table-11. Comparison-enrolment in Pishin district

Enrolment	2002	2008	%age Change
Boys	36,422	43,508	19.46
Girls	17,074	24,409	42.96
Total	53,496	67,917	26.96

SOURCE: BEMIS, 2008-09

Health:

Table-12. Priority diseases in Pishin district (2009)

Diseases	Under 1 yr	1-4 yr	Over 5 yr
Diarrhoea	12,222	14,322	27,107
Dysentery	10,524	13,948	29,367
ARI	13,920	22,826	49,487
Fever	7,585	9,587	18,487
Cough	19	69	2,813
Dog Bite	0	20	54
Scabies	417	1,387	4,595

SOURCE: BHMIS, 2009

Table-13. Number of patients affected by priority and all other diseases in Pishin district (2009)

Diseases	Under 1	1 to 4	Cases 5 and Over	Total
Priority Diseases	44,687	62,159	131,910	238,756
All Diseases	70,161	95,879	281,064	447,104

Water

Table-14. Water filtration plants installed in Pishin in phase I and phase II

#	PHASE-I (2005-06) - Tehsil Level		PHASE-II (2007-10) - Union Council in Pishin Tehsil			
	Name of Tehsil	Locations	Sr. No.	Locations	Sr. No.	Locations
1.	Barshore	AT TMA Office Near Police Station, Barshore City.	1	Near WWS, Christian Colony Tank	8	Near Source of WSS Khudaidad zai
2.	Pishin	At Children park near graveyard and Service station By pass road Pishin.	2	Machan High School T/W	9	Kata Bagh
3.	Hurramzai	At Water Supply Ph-2 Killi Mullah Bismillah Sub Tehsil Hurramzai	3	Tartah	10	WSS Alizai tube well
4.	Karezat	At Water supply scheme Yaro	4	Near source community Killi Torashah	11	WW Gangalzai Near T/WT/W No. 1
5.	Bostan	WSS Bostan at Civil colony Purana Bazar	5	Manzaki Bazar	12	Near Masjid
6.			6	WSS Karbala tube well	13	Near Manzari Adha
7.			7	Near manezai addah	14	WSS Chur Badezai

SOURCE: Clean Drinking Water for All Project, 2010

Forests

Table-15. Designated forests and area in Pishin district (2010)

Forest	Area (ha)
Maselakh	28230.87
Maselakh-S	18324.17
Targatu	13354.63
Takatu-N	4941.212
Surghund	3439.828
Surkhab	1424.898
Gwal	1165.495
Mari Chak	740.5747
Umai	647.497
Popal zai	613.5034
Band K.K	475.1009
Sarawat	416.8262

SOURCE: Balochistan Forest and Wildlife Department, 2010

Table-16. Designated forests in Pishin district

#	Forest	Legal Status	Area	Rights	Remarks
1.	Umai SF	State Forest/ No. 13/44/F.C/75/F. dated the 8th January 1946	1,600 acres or 2.5 square miles.	The Panezais residing in the surrounding hamlets of Umai, Zawar Kach, Galat and Khanai will be permitted by the Forest Department to graze their own domestic cattle in case of declared fodder famine	
2.	Sarawat SF	State Forest/ No. 13/44/F.C/75/F. dated the 8th January 1946	1,030 acres or 1.6 sq. miles	The Panezais people residing in the surroundings hamlets of Jashai, Shinglun, Sarwat, Zawar Kanrai, Zawar Kach And Galat will be permitted by the Forest Department to graze their own domestic cattle in case of declared fodder famine, and to remove dead wood for domestic use only. Camels will not be permitted to graze. Forest Guard for protection and labour for works will be recruited from local Panezais.	
3.	Northern Takatu SF	State Forest/ No. 13/44/F.C/75/F. dated the 8th January 1946	12,210 acres or 19 square miles	The Panezais of neighbouring village and hamlets will be permitted by the Forest Department to graze their own domestic cattle in case of declared fodder famine and to remove dead wood for domestic use only. Camels will not be permitted to graze. Forest Guard for protection and labour for works will be recruited from local Panezais.	

#	Forest	Legal Status	Area	Rights	Remarks
4.	Band Khusdil Khan SF	State Forest/ No. XXVI-a-F./3 (40)-9300-Rev the 23rd Sept.1940 effective from 1st October 1940	1,174 acres		
5.	Maselakh SF	State Forest/ No. 2586/9/51FC. dated the 23rd July 1951	69,760 acres or 109 square miles	<ol style="list-style-type: none"> 1. Removal of dead fallen wood for bona fide domestic use. 2. First choice of labour and contractors within this area to the tribes concerned proportionately. 3. New karezes and chashmas(springs) will be the property of right holders. 	
6.	Southern Maselakh SF	State Forest/ No. 2586/9/51-FC. dated the 25th Sept.1951	70.75 sq. miles	<ul style="list-style-type: none"> • Removal of dead and felled wood for bona fide domestic use. • First choice of labour and contractors within this area to the tribes concerned proportionately. 	
7.	Surghund SF	No. 7860 of 12th Dec. 1894	8,500 acres		Total area of Surghund SF is 16,000 acres (8,500 acres in Pishin District & 7,500 acres in Ziarat/ Loralai Dist)
8.	Gawal SF	State Forest/ No. 5786 dated the 22nd Oct. 1890.	2,880 acres	Gawal villagers have the right to pasture their livestock in the open portion of the forest and to gather Khinjak (wild pistachio) fruit. No camel grazing. No rights in the closed area.	The Kach Pishin road runs through the centre of the forest.
9.	Surkhab SF	State Forest/ No. 72-Dev/II/53. the 15th Dec. 1953.	3,521 acres		
10.	Popal zai SF		1,516 acres		
11.	Targatu SF		33,000 acres		
12.	Mari Chak S.F.	State Forest/No. 3502 dated 6th July 1893	1,830 acres		
	Total	Area in Ha	73775		

SOURCE: Balochistan Forest and Wildlife Department.

Table-17. Plants in Maslakh in Quetta union councils in District Pishin

1.	<i>Acantholimon longiflorum</i> Boiss.
2.	<i>Acantholimon polystachyum</i> Boiss.
3.	<i>Acanthophyllum squarrosum</i> var <i>stocksianum</i> Boiss.
4.	<i>Alhagi maurontm</i> Medic
5.	<i>Alyssum desertorum</i> Stapf.
6.	<i>Anthemis gayana</i> Boiss.
7.	<i>Arenaria serpyllifolia</i> Stocks.
8.	<i>Amebia decumbens</i> (Vent) Coss and Krai.
9.	<i>Amebia</i> sp.
10.	<i>Artemisia herba-alba</i> Asso.
11.	<i>Artemisia scoparia</i> Waldst & Kit.
12.	<i>Astragalus</i> sp.
13.	<i>Astragalus sericostachys</i> Stocks.
14.	<i>Atriplex. canescens</i> James.
15.	<i>Boissiera squarrosa</i> (Soland)Nevski.
16.	<i>Bromus danthoniae</i> Trin.
17.	<i>Bromus tectorum</i> L.
18.	<i>Centaurea bruguieriana</i> (D.C) Hand Mazz
19.	<i>Ceratocarpus arenarius</i> L.
20.	<i>Ceratocephalus falcatus</i> (L) Pers.
21.	<i>Chrysopogon aucheri</i> (Boiss) Stapf.
22.	<i>Convolvulus spinosus</i> Burmn.
23.	<i>Cotula aurea</i> Loeffl.
24.	<i>Cousmia alepidia</i> Boiss.
25.	<i>Cousinia bipinnata</i> Boiss.
26.	<i>Crepis</i> sp.
27.	<i>Cymbopogon olivieri</i> (Boiss) Bor.
28.	<i>Cyperus rotundus</i> L.
29.	<i>Delphinium centeteroides</i> (Bruhl) Munz.
30.	<i>Descurainia sophia</i> (L) Webb ex Prantl,
31.	<i>Diarthron vesiculosum</i> (Fish & Mey) C.A.Mey
32.	<i>Draba hystrix</i> H.&T.
33.	<i>Ducrosia anethifolia</i> (D.C) Boiss.
34.	<i>Ebenus stellata</i> Boiss.
35.	<i>Echinops griffithianus</i> Boiss.
36.	<i>Ephedra ciliata</i> Fish & Mey.
37.	<i>Ephedra intermedia</i> schrenk and Mey.
38.	<i>Eremopyrum bonaepartis</i> (Spreng) nevski.
39.	<i>Erodium bryoniafolium</i> boiss.
40.	<i>Eryngium carlinoides</i> boiss.
41.	<i>Euphorbia osyridea</i> boiss.
42.	<i>Ferula baluchistanica</i>
43.	<i>Gagea persica</i> boiss.

44.	<i>Gentiana olivieri</i> Griseb.
45.	<i>Garhadiolus papposus</i> Boiss.
46.	<i>Haloxylon griffithii</i> (Moq) Bunge.ex Boiss.
47.	<i>Haplophyllum tuberculatum</i> (Forsk).A. Juss.
48.	<i>Holosteum umbellatum</i> L.
49.	<i>Hordeum murinum</i> L.
50.	<i>Koeplinia linearis</i> Pallas.
51.	<i>Lactuca viminia</i> (L) F.W. Schmidth.
52.	<i>Limonium griffithii</i> (Aitch. & Hemsl.)O.Kitze
53.	<i>Mathiola flavida</i> Boiss.
54.	<i>Nonnea pulla</i> (L.) D.C.
55.	<i>Onobrychis tavemiefolia</i> Stocks.ex Boiss.
56.	<i>Papaver comigerum</i> Stocks.
57.	<i>Peganum harmala</i> L.
58.	<i>Pistatia khinjuk</i> Stocks.(Seedling).
59.	<i>Poa sinaica</i> Steud.
60.	<i>Poa bulbosa</i> var <i>vivipara</i> Koel.
61.	<i>Poa</i> sp.
62.	<i>Polygonum afghanicum</i> Meissn.
63.	<i>Psammogeton biternatum</i> Edgew.
64.	<i>Pteropyrum olivieri</i> J&S,
65.	<i>Pulicaria angustifolia</i> Stocks.ex Boiss,
66.	<i>Salvia santolinaefolia</i> Boiss.
67.	<i>Scabiosa olivieri</i> Coult.
68.	<i>Senecio desfontanei</i> Druce.
69.	<i>Silene viscosa</i> Forssk.
70.	<i>Sophora mollis</i> (Roy\Q) Baker,
71.	<i>Stocksia brahuica</i> Bth
72.	<i>Suaeda fnticosa</i> (L^ Forssk.
73.	<i>Taeniatherum crinitum</i> (Schred) Nevski,
74.	<i>Taverniera cuneifolia</i> Stocks.
75.	<i>Torularia torulosa</i> (Des£) O.E.S.
76.	<i>Tulipa lehmanniana</i> Merchl.
77.	<i>Trigonella incisa</i> Bth.
78.	<i>Trigonella monantha</i> C. A. Mey.
79.	<i>Valeriana jatamansi</i> Jones.
80.	<i>Valerianella dufresnia</i> Bunge.ex Boiss.
81.	<i>Veronica hiloba</i> L.
82.	<i>Ziziphora tenuior</i> L. Zoegia
83.	<i>purpurea</i> Freson.

SOURCE: Vegetation Studies in Masalakh Range, Pishin district, 1989

Climatic Conditions in Pishin:

Table-18. Month wise average rainfall in Quetta district for 2008 and 1961-2004

Months	Mean Max (1961-04)	Mean Max (2008)	Mean Min (1961-04)	Mean Min (2008)
Jan	11.3	7	-2.3	-2.7
Feb	13.6	13.1	-0.6	-3.4
Mar	18.8	24.2	3.9	4.3
Apr	25.4	26.5	11.2	8.3
May	30.9	33.3	12.3	12.5
Jun	35.4	37.6	17	20.6
Jul	36.2	37.2	20.4	22
Aug	35.3	34.8	18.6	16.8
Sep	31.7	32.1	14.6	12.4
Oct	25.7	28.4	5	6.1
Nov	19.7	20.3	0.4	-0.3
Dec	14.3	16.5	-2	-1
Avg.	24.9	25.9	8.2	7.9

SOURCE: Bureau of Water Resources, 2008-09; Water Requirements of Major Crops for Different Agro-Climatic Zones of Balochistan, 2006

Table-19. Comparison of monthly mean rainfall of Quetta station in 2007 and monthly average rainfall 1961-2004

Months	Avg. (1961-2004)	Avg. 2007
Jan	52	12
Feb	44	77
Mar	48	19
Apr	25	6
May	7	0.3
Jun	1	74.6
Jul	15	20
Aug	8	0
Sep	3	0
Oct	5	0
Nov	5	4
Dec	34	15

SOURCE: Pakistan Meteorological Department

Table-20. Relative humidity, daily sunshine and ETo (Evapo-transpiration coefficient) for the period 1961-2004

Month	Relative Humidity (%)	Daily Sunshine (hrs)	ETo (mm/d)
Jan	58	6.3	2.39
Feb	55	7.3	3.23
Mar	51	7.6	4.77
Apr	43	8.4	7.04
May	33	10.7	9.79
Jun	28	9.9	10.82
Jul	34	9.5	10.46
Aug	35	9.4	9.19
Sep	32	9.5	8.14
Oct	32	9.7	6.11
Nov	41	7.6	4.11
Dec	50	7.5	2.74

SOURCE: Water Requirements of Major Crops for Different Agro-climatic Zones of Balochistan, 2006

Agriculture

Table-21. Crop and water requirement in zone V (includes Pishin)

Crops	ETO (mm)	CWR (mm)
Wheat	431	314
Potato	1,082-1270	686-825
Onion	1,059-1227	603-698
Sunflower	909-964	784-842
Grapes	2,026	928
Apple/Cherry	2,125	1,393
Apricot/Almonds	2,126	1,393
Pomegranate	2,126	1,393
Alfalfa	1,049	833

SOURCE: Water Requirements of Major Crops for Different Agro-climatic Zones of Balochistan, 2006

Table-22. Sources of irrigation in Pishin district

Type of Irrigation	Area (ha)
Area under flood irrigation	607
Area under perennial excluding tube-wells and <i>karez</i> s	2,225
Area under tube-well irrigation	2,832
Area under <i>karez</i>	6,475

SOURCE: Executive Engineer Irrigation Department, Pishin, 2009

Table-23. Sources of irrigation and area (hectare) irrigated in Pishin district

	Area (ha)
Karezes, Springs & Others	667
Tube wells	25346
Wells	465

SOURCE: Agricultural Statistics of Balochistan, 2008-09

Table-24. Comparison of crops for the years 2007-08 and 2008-09

	Area (ha)	Prod (tonnes)
Rabi Crops (2007-08)	6,538	13,426
Rabi Crops (2008-09)	10,799	20,067
Kharif Crops (2007-08)	21,864	177,873
Kharif Crops (2008-09)	21,368	177,378
Total (07-08)	28,402	191,299
Total (08-09)	32,167	197,445

SOURCE: Agricultural Statistics of Balochistan, 2008-09

Table-25. Area and production of fruit in Pishin district (2008-09)

Fruit	Area (ha)	Prod (tonnes)	Yield (kg/ha)
Grapes	8,305	49,786	7,714
Apple	6,133	43,611	10,629
Pomegranate	423	6,376	16,060
Apricot	977	4,663	6,318
Peach	284	3,626	13,893
Plum	473	3,011	7,186
Pistachio	50	696	13,920
Almond	303	619	2,180
Others	14	68	4,857
Cherry	13	18	2,571

SOURCE: Agricultural Statistics of Balochistan, 2008-09

Table-26. Area, production and average yield of rabi crops in Pishin district

Crops	Area (ha)	Prod (tonnes)	Avg. Yield (kg/ha)
Grapes	8,305	49,786	7,714
Apple	6,133	43,611	10,629
Pomegranate	423	6,376	16,060
Apricot	977	4,663	6,318
Peach	284	3,626	13,893
Plum	473	3,011	7,186
Pistachio	50	696	13,920
Almond	303	619	2,180
Others	14	68	4,857
Cherry	13	18	2,571

SOURCE: Agricultural Statistics of Balochistan, 2008-09

Table-27. Agricultural machinery in Pishin district (2008-09)

	Govt.	Private	Total
T. Wells (Electric)	174	3,169	3,343
T. Wells (Diesel)	14	1,009	1,023
Tractors	10	1,038	1,048
Threshers	4	158	162
Bulldozers	12	9	21

SOURCE: Agricultural Statistics of Balochistan, 2008-09

Table-28. Area, production and average yield of all kharif crops in Pishin district (2007-08 and 2008-09)

	Area (ha)	Prod (tones)	Avg. Yield (kg/ha)
Fruits (07-08)	16,804	111,613	6,642
Fruits (08-09)	16,978	112,483	6,625
Onion (07-08)	196	1,019	5,199
Onion (08-09)	175	3,184	18,194
Potato (07-08)	791	11,775	14,886
Potato (08-09)	317	6,050	19,085
Vegetables (07-08)	1,380	9,056	6,562
Vegetables (08-09)	1,315	10,273	7,812
Melons (07-08)	868	6,124	7,055
Melons (08-09)	807	7,931	9,828
Chillies (07-08)	60	95	1,583
Chillies (08-09)	58	92	1,586
Fodder (07-08)	1,091	37,280	34,170
Fodder (08-09)	1,055	36,470	34,536
Tobacco (07-08)	674	911	1,352
Tobacco (08-09)	662	895	1,352

SOURCE: Agricultural Statistics of Balochistan, 2007-08 and 2008-09

Livestock:

Table-29. Livestock population in Pishin district (2006)

	No.
Sheep	837,233
Goats	504,510
Cattle	91,433
Asses	21,220
Horse	3,343
Buffalo	994
Camel	745
Mule	467
Poultry	531,751

SOURCE: Balochistan Livestock Census, 2006

Table-30. Cattle breeds and numbers in Pishin district (2006)

Breed	Male	Female	Total
Sahiwal	2,116	2,255	718
Red Sindhi	1,097	1,464	402
Bhag Nari	271	932	137
Gabrali	298	547	4
Achai	42	710	14
Lohani	446	102	7
Kankraj	161	386	6
Thari	153	334	27
Rojhan	193	196	9
Dhanni	115	8	30

SOURCE: Balochistan Livestock Census, 2006

Table-31. Breeds of buffaloes in Pishin district (2006)

Breed	Male	Female	Total
Others	20	283	303
Kundhi	54	34	88
Nili/Ravi	3	47	50
Azakhale	0	15	15

SOURCE: Balochistan Livestock Census, 2006

Table-32. Sheep breeds and numbers in Pishin district (2006)

Breed	Male	Female	Young < 1 yr	Total
Harnai	9,724	35,763	49,593	131,883
Balochi	6,850	10,785	5,780	23,415
Damani	1,984	5,724	3,102	10,810
Kaghani	754	3,872	3,655	8,281
Lohi	508	1,366	838	2,712
Bibrik	837	806	676	2,319
Rakhshani	895	629	546	2,070
Kachhi	266	167	314	747
Balkhi	264	180	170	614
Bekaneere	7	163	293	463
Other	428	364	330	1,122

SOURCE: Balochistan Livestock Census, 2006

Table-33. Goat Breeds and Numbers in Pishin district (2006)

Breed	Male	Female	Young Stock	Total
Barbery	7,267	40,309	36,912	84,487
Jatan	3,609	15,633	11,425	30,667
Kamori	596	4,965	3,818	9,378
Damani	3,246	4,420	589	8,255
Teddy	327	3,367	4,079	7,773
Pateri	128	84	872	1,084
Daira Din Panah	52	356	83	491
Kaghani	38	56	321	414
Nachi	152	189	47	388
Beetal	47	113	132	292
Chappar	2	2	46	50

SOURCE: Balochistan Livestock Census, 2006

Table-34. Goat and sheep numbers regarding size of herd in Pishin district (2006)

Size	Sheep	Goats
1-5	12,965	12,421
6-15	90,329	77,021
16-30	117,259	179,060
31-50	89,565	116,268
51-75	51,530	46,275
76-100	29,710	14,481
101-150	15,775	28,945
151-200	759	9,727
201-350	6,622	20,312
> 351	422,720	0

SOURCE: Balochistan Livestock Census, 2006 - Pishin IDDV

Table-35. Number of buffaloes by age and size of herd in Pishin district (2006)

Size	Total > 3 yr	Total < 3 yr
01-02	507	199
03-04	127	19
05-06	112	17
07-10	41	12
11-15	0	0
16-20	0	0
21-30	0	0
31-50	152	140
> 51	52	40

SOURCE: Balochistan Livestock Census, 2006

Table-36. Number of cattle by age and size of herd in Pishin district (2006)

Size	Total > 3 yr	Total < 3 yr
01-02	11,608	7,785
03-04	15,216	9,393
05-06	10,129	6,044
07-10	8,865	4,633
11-15	2,274	1,435
16-20	1,037	377
21-30	881	364
31-50	685	321
> 51	10,388	412

SOURCE: Balochistan Livestock Census, 2006

Table-37. Total number of milkcows/buffaloes by size of herd in Pishin district (2006)

Size	Milk Cows/Bufaloes
01-02	24,094
03-04	11,662
05-06	3,262
07-10	1,508
11-15	489
16-20	687
21-30	590
31-50	391
> 50	8,882

SOURCE: Balochistan Livestock Census, 2006

Table-38. Number of sheep by breed in Pishin district (2006)

Breed	Male	Female	Young < 1 yr	Total
Harnai	9,724	35,763	31,259	76,746
Balochi	6,850	10,785	5,780	23,415
Damani	1,984	5,724	3,102	10,810
Kaghani	754	3,872	3,655	8,281
Lohi	508	1,366	838	2,712
Bibrik	837	806	676	2,319
Rakhshani	895	629	546	2,070
Kacchi	266	167	314	747
Balkhi	264	180	170	614
Bekaneere	7	163	293	463
Other	428	364	330	1,122

SOURCE: Balochistan Livestock Census, 2006

Table-39. Goat improved breeds and their numbers in Pishin district (2006)

Breed	Male	Female	Young Stock	Total
Barbery	7,267	40,309	36,912	84,487
Jatan	3,609	15,633	11,425	30,667
Kamori	596	4,965	3,818	9,378
Damani	3,246	4,420	589	8,255
Teddy	327	3,367	4,079	7,773
Lehri	254	659	470	1,383
Pateri	128	84	872	1,084
Daira Din Panah	52	356	83	491
Kaghani	38	56	321	414
Nachi	152	189	47	388
Beetal	47	113	132	292
Chappar	2	2	46	50

SOURCE: Balochistan Livestock Census, 2006

Table-40. Veterinary coverage and other factors regarding sheep and goats (2006)

Veterinary Coverage	Sheep	Goats
Vaccinated	138,238	197,337
Fallen Sick	33,864	55,392
Treated	33,035	52,217
Slaughtered On Eid-ul-Azha	5,380	7,691
Slaughtered On Eid-ul-Azha	4,231	5,839
Sold Out	9,931	16,315
Died	4,830	9,079
Purchased	5,604	10,601
Born	244,300	126,859

SOURCE: Balochistan Livestock Census, 2006

Table-41. Veterinary coverage of cattle (2006)

Veterinary Coverage	Bullocks	Cows	Male Young	Female Young
Vaccinated	940	23265	3920	2471
Fallen Sick	222	5145	240	307
Treated	178	4858	180	249
Other	428	364	330	1,122

SOURCE: Balochistan Livestock Census, 2006

Table-42. Veterinary coverage of sheep and goats in Pishin district (2006)

Veterinary Coverage	Sheep	Sheep Young	Goats	Goats Young
Vaccinated	19239	27699	234529	40501
Fallen Sick	41841	6497	48692	7276
Treated	36559	3470	41090	5200

SOURCE: Balochistan Livestock Census, 2006

Table-43. Number of work animals in the district (2006)

Purpose	Asses	Horses	Camels	Mules	Bullocks	Cows
Ploughing	2,102	2	26	-	7	-
Other Agri.	4,316	1,002	16	1	42	75
Non-Agri.	9,323	1,317	44	466	-	3

SOURCE: Balochistan Livestock Census, 2006

Poultry:

Table-44. Number of domestic poultry birds by size of flock in Pishin district (2006)

Herd Size	Cocks	Hens	Chicken	Ducks, Drakes and Ducklings
1-10	23,017	63,253	8,690	93
11-25	49,508	146,381	88,823	1,159
26-50	18,652	52,091	40,851	994
51-75	4,871	8,938	7,296	12
76-100	1,599	4,644	3,528	
100-200	258	2,830	956	
200-500	6	2,333	67	

SOURCE: Balochistan Livestock Census, 2006

Mines and Minerals:

Table-45. Minerals in Pishin district

S. No.	Mineral	Field/ Locality	Quantity	Add. Information/ Remarks
1.	Marble	Gawal, Wuchkhula, Spararagha	Unmeasured	
2.	Chromite	Khanozai, Rod Mulazai, Dilsora, Khushaab	9594 MT	Up-gradation required for value addition and reducing transportation costs - Mechanisation in exploitation - Technical assistance
3.	Granite	Torakhula	Unmeasured	
4.	Mica	Torakhula	Unmeasured	
5.	Coal	Spararagha road, Kuz kach	Unmeasured	
6.	Copper ore	Khanozai, Dilsora, Rod Mulazai	110 MT	
7.	Iron ore	Khanozai	Unmeasured	
8.	Limestone	Gawal	Unmeasured	
9.	Quartzite	Paran	Unmeasured	
10.	Betonite clay	Bostan		Licence not granted
11.	Magnetite (small % of Nickel)	Khanozai	Unmeasured	

SOURCE: Balochistan Directorate General of Minerals and Mining, 2010

Table-46. Mineral wise number of concessions granted and area as of 30th June, 2006

S.#	Minerals	PROSPECTING LICENCES		MINING LEASES		TOTAL	
		NUMBER	ACREAGE	NUMBER	ACREAGE	NUMBER	ACREAGE
	Total	20	13,823.07	6	5,719.92	26	19,002.99
1.	Marble	4	2,326.34	0	0	4	2,326.34
2.	Chromite	8	3,679.40	5	4,988.94	13	8,668.34
3.	Granite	1	408.94	0	0	1	408.94
4.	Mica	1	30.59	0	0	1	30.59
5.	Coal	2	2,934.40	0	0	2	2,934.40
6.	Copper	2	2,872.47	0	0	2	2,872.47
7.	Iron Ore	0	0	1	190.98	1	190.98
8.	Limestone	1	496.55	0	0	1	496.55
9.	Quartzite	1	1,074.38	0	0	1	1,074.38

SOURCE: Balochistan Directorate General of Minerals and Mining, 2010

Provincial Finances:

Table-47. Actual PSDP allocation (original) for 2008-09, 2009-10 and 2010 - 11 (Rs. in million)

	2008-09	2009-10	2010-11
Roads	244.165	228.746	374.147
Education	86.342	78.696	75
Irrigation	71.49	18.824	70.881
Health	12.712	24	93
Power	2.5	30	90
PHE		60	
Social Welfare & WR			55
Agriculture			50
PP&H		7	18.149
Info. Tech	5	4.936	

SOURCE: Balochistan PSDP, 2008-09, 2009-10 and 2010-11

Table-48. Actual PSDP Allocation (Original) for Pishin district (2010-11) (Rs. in million)

	2010-11
Roads	374.147
Health	93
Power	90
Education	75
Irrigation	70.881
Social Welfare & WR	55
Agriculture	50
PP&H	18.149

SOURCE: Balochistan PSDP, 2010-11

Table-49. Actual Sectors PSDP Allocations (Original) Combined for 2008-09, 2009-10 and 2010-11 (Rs. in million)

	Rs. (Million)
Roads	847.058
Education	240.038
Irrigation	161.195
Health	129.712
Power	122.5
PHE	60
Social Welfare & WR	55
Agriculture	50
PP&H	25.149
Info. Tech.	9.936

SOURCE: PSDP, 2008-09, 2009-10 and 2010-11

Table-50. Sectoral PSDP allocation (2008-09, 2009-10 and 2010-11) for Balochistan (Rs. in million)

Sectors	2008-09	2009-10	2010-11
Roads	2,656.19	3,887	2150
Education	1,840.191	1,313.759	1,036.151
Fisheries	0	41	1,058
Social Welfare & Women Dev.	37.208	270	618.5
Health	272.142	183.575	175.38
Agriculture	90.602	170.461	193.834
PHE	91.381	138.634	140.339
Environment	51.482	164.227	30.1
Local Govt.	114.265	25.265	9.036
Power		20	115
PP&H	98.394	7	22.922
Mining	0	21	71.1
Livestock	17.422	20.284	5
Forestry	10	8	5
Irrigation	12.279	10	0
Labour & Manpower	8.194	10	0
Sports			15
Information Tech.	8.266		5

SOURCE: PSDP, 2008-09, 2009-10 and 2010-11

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